

STRATEGEP

A Better Medicare For Healthier Seniors:



Recommendations to Modernize Medicare's Prevention Policies

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Who We Are:

Partnership for Prevention is a membership-based health policy think tank. We develop and advance policies and programs by uniting the health interests of private organizations and federal, state, and local governments. Our membership includes national employers, nonprofit policy and research institutions, professional and trade associations, voluntary health organizations, health plans, and state health departments. Partnership adheres to the highest standards of scientific evidence supporting the case for prevention. Partnership can be found online at www.prevent.org.

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Foreward

When Congress created Medicare in 1965, it designed the program based on the knowledge of health, medicine and health care at that time. Thus, Medicare came into being as a national insurance system to cover hospitalization and visits to doctors' offices for diagnoses and treatment for Americans age 65 and over.

In the nearly four decades that have ensued, considerable research and practice have yielded proven ways to prevent disease and promote longer, healthier life. Today we know that postponing disease and disability, maintaining social function, and sustaining independence are achievable for older adults with well-selected health promotion and disease prevention services.

For example, adults over age 65 who quit smoking improve their chances of survival despite decades of tobacco use. Delivery of tobacco cessation counseling and nicotine replacement therapies would increase the number who quit. We also know effective methods for improving delivery of the influenza and pneumococcal vaccinations to older adults, preventing a significant portion of the 36,000 influenza and pneumococcal pneumonia deaths annually. And research tells us that routine vision screening has many benefits for older adults, not the least of which is a reduction in falls that result in hip fractures, hospitalization, and nursing home care.

In some cases, effective preventive services would generate cost savings for Medicare. And many that are not cost saving are cost effective, providing beneficiaries with more productive years of life for a reasonable cost. Prevention is a good investment, offering fewer years of disability and discomfort, less time in hospitals and in nursing homes, and more time spent working, caring for grandchildren, and volunteering.

Congress has added selected preventive services to Medicare but has not included other services that are proven effective, nor has it encouraged Medicare to take a comprehensive approach to disease prevention and health promotion for American seniors.

It is in the interest not only of Medicare beneficiaries but also our entire nation for America's seniors to be healthy instead of infirm, active instead of hospitalized, productive instead of costly, independent instead of dependent. Disease prevention and health promotion should be given the same priority in Medicare as disease treatment and care. Cost-saving and cost-effective disease prevention and health promotion services are sound investments for our country.

Partnership for Prevention, on whose board we serve, carefully developed the recommendations in this book to help policymakers increase Medicare's emphasis on disease prevention and health promotion. These recommendations would move the country toward realization of two of our nation's health goals: increasing life expectancy and improving quality of life, and reducing disparities in health among different segments of the population. We encourage you to read and discuss these recommendations, and then to incorporate them into policy.

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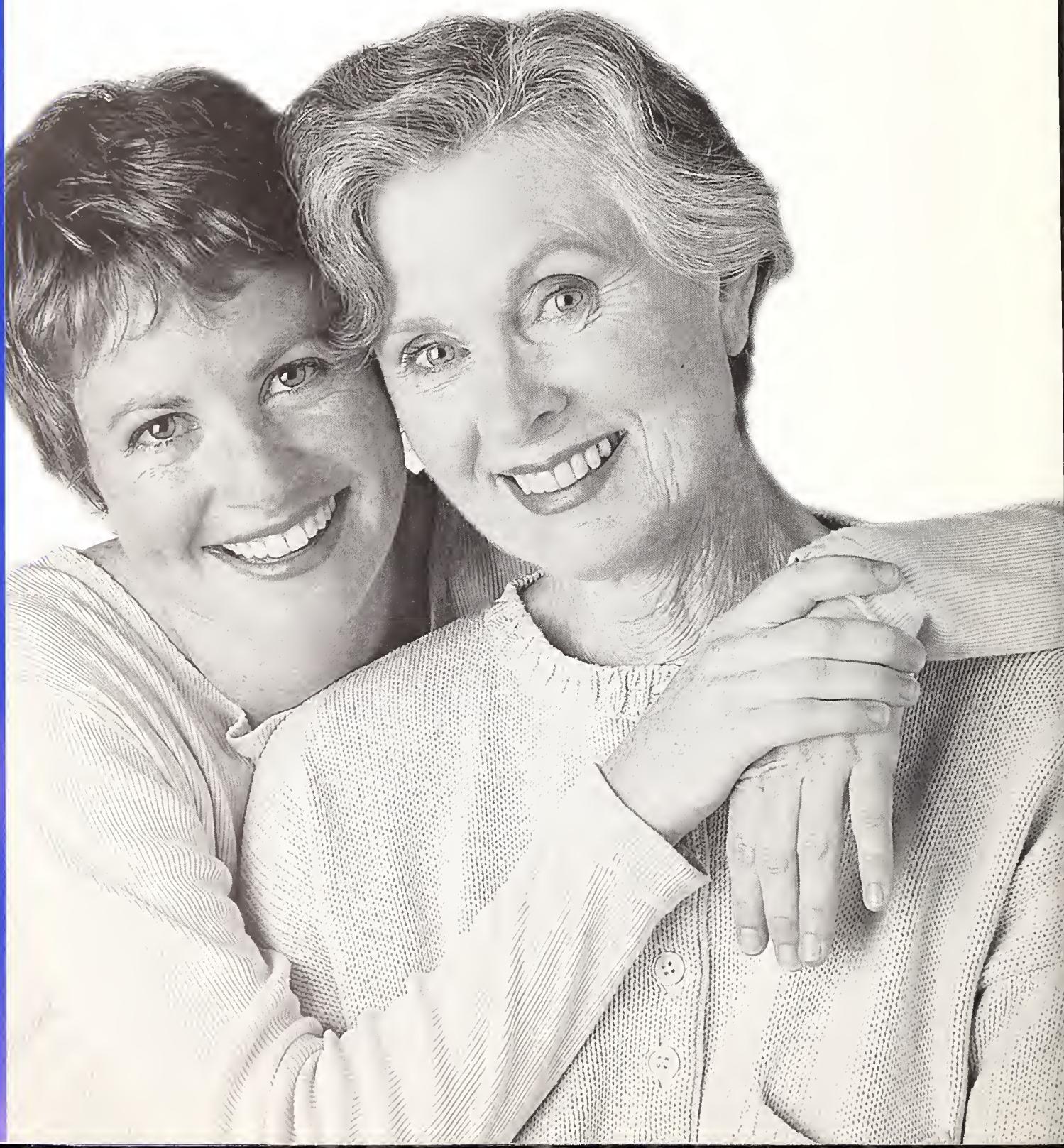
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Executive Summary





Introduction

A considerable and growing body of evidence demonstrates that clinical preventive services can extend the lives and promote the well being of older adults. Appropriately chosen screening services can detect diseases earlier and improve treatment outcomes, vaccinations can prevent the occurrence and severity of disease, and counseling by providers can lead to behavioral changes that reduce rates of disease occurrence and severity.

Currently, 34 million Americans over age 65, 5.5 million younger disabled persons, and 240,000 persons with End-Stage Renal Disease participate in Medicare at an estimated annual cost to the federal government of nearly \$250 billion. By 2030, it is estimated that Medicare will serve 77 million Americans. As the primary source of health insurance coverage for millions of older Americans and persons with permanent disabilities, Medicare has the potential to have a substantial impact on the health of beneficiaries by promoting and covering cost-effective preventive services.

Despite Medicare's tremendous successes in reducing financial burdens for seniors and its widespread popularity, the program has notable remaining gaps in coverage, including outpatient prescription drugs and clinical preventive services. These services were considered of secondary importance when Medicare was established in 1965, but they have grown in importance and value as a result of technology improvements and evidence of health benefit over the intervening four decades. Private sector insurers and managed care plans have largely provided coverage for these services. In piecemeal fashion, Congress has added coverage for some clinical preventive services that have been found to be effective in improving health.

Today, Medicare covers preventive services for 10 different diseases and conditions. (Please see Tables 1 and 2 on pages 38 and 40 to examine Medicare's current coverage of preventive services and gaps in coverage.) The majority of these covered services have been determined to be effective by the U.S. Preventive Services Task Force (USPSTF). However, the USPSTF recommends a number of other screening, counseling, and chemoprevention services for adults over 65 that are not covered.

The federally-convened, independent U.S. Preventive Services Task Force (USPSTF) reviews all evidence for and against clinical preventive services and periodically publishes evidence-based recommendations. These recommendations provide sound guidance to doctors and other clinicians about which preventive services to provide at the appropriate time. The USPSTF recommendations can also guide coverage decisions, although not all USPSTF recommendations translate directly into coverage policy. Issues in addition to services' ability to reduce disease burden must be considered, such as current practices, provider capabilities, and the best reimbursement mechanisms. The latest recommendations of the USPSTF may be found at <http://www.ahrq.gov/clinic/prevenix.htm>

While use rates of covered preventive services have increased over the past decade, they fall short of national targets for most services. Medicare has missed opportunities to partner with others responsible for beneficiaries' health and to maximize the benefits of existing partnerships, to leverage community resources for health protection and promotion, and to use population-based approaches to complement the work of health professionals.

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Partnership for Prevention, a membership-based health policy think tank, envisions a Medicare system that effectively and comprehensively addresses the prevention needs of seniors. Many reforms have been discussed to improve the quality and lower the costs of Medicare, but none address the important and neglected area of disease prevention and health promotion. Broad reform is not necessary to make significant progress now on prevention. Conversely, prevention should not be neglected in proposals for broad reform and/or coverage for outpatient prescription drug benefits.

In an effort to improve the health and health care of seniors, Partnership examined the coverage and delivery of clinical preventive services under Medicare. It commissioned three background papers, prepared by leading experts in the field, to summarize key trends and inform discussion of policy options. Based on this information, a diverse advisory committee of experts developed specific policy recommendations to encourage congressional and administrative action on Medicare preventive services in 2003.

BACKGROUND

Congress has interpreted the Medicare statute as excluding coverage for clinical preventive services. However, over the last two decades, Congress itself has made exceptions and added coverage for specific preventive services, such as influenza and pneumococcal vaccines, mammography, and colorectal cancer screening. In contrast to coverage for preventive services, coverage decisions about new diagnostic and treatment services and durable medical equipment under Medicare are made through administrative rather than legislative action.

Reliance on Congress to cover preventive services has resulted in:

- Coverage for only half of clinical preventive services that experts recommend for the 65+ age group.
- Coverage that is inconsistent with authoritative recommendations. For example, Medicare covers prostate cancer screening although the USPSTF has found insufficient evidence to recommend for or against screening in asymptomatic men over age 65.
- Coverage that fails to keep up with changes in scientific evidence. In 1998, coverage was extended to osteoporosis screening for high-risk women, despite inconclusive evidence of benefit at that time. Today, screening is recommended for all women over 65, but coverage is still restricted to older women at high-risk.
- A confusing array of cost-sharing requirements (e.g., deductibles and copays) across covered preventive services.
- An under-emphasis on the use of services by Medicare beneficiaries. As a result, use rates for most Medicare preventive services fall short of national targets set by Healthy People 2010.

Congress is burdened by the inefficiencies of service-by-service decision-making about frequently complex clinical prevention matters. Some preventive services that provide great health benefits at a low cost are overlooked in favor of other services that do not meet the evidence standards to be recommended, but have effective political advocacy groups. Also, the legislative process moves slowly. Bills are often introduced many times over a



Background Papers

period of years before final passage. Under the current process, as additional preventive services are found to be effective, we can expect to see further distance between what is beneficial for seniors and what is covered by Medicare, and between what is covered by private insurance and what is covered by Medicare. The ideal decision-making process would be proactive, comprehensive, and coordinated and based upon rigorous review of scientific evidence and expert guidance.

An extraordinary hurdle for preventive services—beyond the typical hurdles one expects from the legislative process—is the budget rules Congress has set for itself to ensure fiscal responsibility. Each time a service is added, it must prove to be cost neutral or equal cuts must be found. Some preventive services, such as many immunizations, can be cost saving, but preventive services are usually not budget neutral. However, well-selected health promotion and disease prevention services can be highly cost-effective, maintaining and enhancing health and quality of life at a reasonable cost. The current requirement that preventive services must be budget neutral or cost saving to achieve coverage overlooks the return on taxpayers' investment these services provide to beneficiaries, their families, and society.

Even after Congress has approved clinical preventive services, they are frequently delivered at less than optimal rates to Medicare beneficiaries. Many factors influence use rates, such as the office-based infrastructure physicians need to track and implement preventive services; an absence of knowledge or prevailing culture of practice that integrates prevention and medical care services; and an adequate awareness and demand by patients for preventive services. Evidence-based interventions to improve delivery of preventive services are available, making

better performance feasible, yet a visible commitment and comprehensive plan to improve use rates is not apparent from the Department of Health and Human Services (DHHS) and insufficient resources have been devoted to this task.

Medicare inherits many health problems from our private sector health care system. If DHHS agencies—those responsible for payment, research, and delivery—took the lead in making evidence-based coverage decisions for preventive services and encouraging their use, it would inform and influence private sector coverage decisions and actions. This could potentially reduce the number of high-risk, high-cost beneficiaries entering the program. Many in the private sector would welcome leadership by the government and its research and health policy convening capacities to better inform their coverage decisions.

Medicare's erratic and incomplete acceptance of prevention has limited the program's effectiveness. As Medicare prepares for an influx of beneficiaries, it is time for Medicare to lead the nation in fully embracing the power of prevention.

BACKGROUND PAPERS

The three background papers in this package review the history and current policy issues related to the expansion of Medicare's coverage for preventive services, compare alternative methods to make coverage decisions, and summarize current use rates and identify barriers to use of preventive services. As a group, these papers argue that the current decision-making process for Medicare preventive services is flawed and has produced inconsistent results. Changes are needed to provide the optimal health benefits for the nation's seniors. Greater attention is also required to improve the use of preventive services by Medicare beneficiaries.

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Historical and Current Policy Issues in Establishing Medicare Coverage for Clinical Preventive Services, Gilbert S. Omenn, MD, PhD.

An examination of Medicare's history makes clear that the exclusion of preventive services from coverage was not intentional; they were not even considered, as medical care was quite different in the early 1960s. Knowledge about the benefits of prevention for older adults has since emerged. A rich literature documents that improvements in function and independence and postponement of chronic disease and disability are achievable in older populations. In fact, as life expectancy increases, adults over 65 have more years to benefit from disease prevention and health promotion.

A number of real and perceived barriers inhibit policymakers from reaching consensus on a health promotion and disease prevention mission for Medicare. These barriers include skepticism about the value of prevention for older adults; philosophical objections to government involvement in changing health-related behaviors; concerns about the cost of prevention; and unrealistic expectations about preventive services' potential for cost savings. Although these concerns have merit, the preponderance of evidence supports investments in prevention among the elderly.

Two strategies are proposed to improve payment and delivery of preventive care to seniors: 1) adding coverage for specific preventive services, or groups of services, one at time, to help ensure delivery of preventive services during the course of ongoing medical care; and 2) covering a comprehensive "Welcome to Medicare"

visit for persons at age 65 focused on health promotion and disease prevention and communication with beneficiaries about their Medicare benefits and responsibilities. These topics could be reinforced at future clinical visits and linked to programs in the community. The visit could help create a "buzz" about staying healthy and provide a context for the desired utilization of the individual clinical preventive services and community programs.

How Should Medicare Cover Preventive Services? A Policy Analysis, Douglas B. Kamerow, MD, MPH

Several options for making Medicare coverage decisions for clinical preventive services are critically analyzed. These include, among other options, retaining the status quo, where Congress must approve any changes in prevention coverage; incorporating preventive services into the current system of national Medicare coverage determinations at the Centers for Medicare and Medicaid Services; and mandating that coverage decisions are tied to the recommendations of a specific outside group, such as the USPSTF.

Under any of these options, coverage decision-making is complex and must take into account multiple issues. Counseling about health-related behaviors presents challenges for insurance coverage due to the difficulty of defining the content of counseling and appropriate providers. Where the evidence for counseling is strong, such as for smoking cessation counseling, a number of health plans and insurance carriers have decided to provide coverage.

As life expectancy increases, adults over 65 have more years to benefit from disease prevention and health promotion.



There are feasible options other than fee-for-service payments for increasing delivery of preventive services, such as brief counseling about smoking. For example, an overall financial incentive for a private clinic or medical group may encourage delivery of preventive care, if delivery can be measured accurately. HealthPartners, a Minnesota-based health plan, established target goals for identifying smoking status (80% of audited charts) and providing smoking cessation advice (80% of smokers advised at most recent visit) among its contracted medical groups. The number of medical groups meeting the targets moved from 0 of 20 to 8 of 20 over a 3 year period. The mean rate among all groups for identifying smokers went from 49% to 71%, and advice to quit rose from 31% to 53%. HealthPartners expects a significant effect on their members' smoking cessation rates. For more information, see the Joint Commission Journal on Quality and Safety, February 2003.

The costs and cost-effectiveness of services are important considerations. The value of health care services can be measured by comparing a service's net costs to the health benefits that accrue from the service. (Net cost is defined as the cost of the service minus the cost avoided by the service.) Comparing net cost to services' health benefits is what is meant by cost-effectiveness analysis (CEA). For example, biennial mammography for women 50-69 years costs \$22,000 per year of life saved*. High-quality CEA can be used to compare the value of preventive, diagnostic, and treatment services. In most cases, effective preventive services will not result in net savings for Medicare. Many preventive services, however, provide much better value than later treatments for the same condition.

**The meaning and uses of cost-effectiveness analysis can be found on page 22 of the Omenn paper and page 48 of the Kamerow*

paper. For greater detail, see the Partnership for Prevention publication, A Policymakers Guide to Cost Effectiveness Analysis, available free-of-charge on the web at www.prevent.org.

Increasing Use of Clinical Preventive Services Among Medicare Beneficiaries, Jonathan E. Fielding, MD, MPH, MBA and Peter V. Long, MHS

Many Medicare beneficiaries do not receive the preventive services that Medicare already covers. Although the majority of Medicare beneficiaries receive at least one preventive service within the appropriate interval, few are up-to-date on the full range of recommended preventive services. In 1999, for example, 91% of older women had received at least one preventive service, but only 10% were screened for cervical, breast, and colorectal cancer and immunized against the flu and pneumonia. Also, disparities in use of preventive services exist across states and between racial and ethnic groups and among income and education levels. In 2001, for example, 58% of African Americans were vaccinated for influenza in the past year compared to 68% of whites and 74% of Asians.

A number of related factors determine use of preventive services, including the policy environment, the organization of the health care system, and characteristics, knowledge, and attitudes of health care providers and patients. The federal government has invested in a number of activities to understand what influences use rates for preventive care and how best to improve them. The Centers for Medicare and Medicaid Services, the Centers for Disease Control and Prevention, and the Agency for Healthcare Research and Quality each make contributions, but do not appear to be part of a single comprehensive plan.

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To determine what works to improve use of preventive services at what cost, CMS and CDC have each sponsored reviews of the evidence. These reviews concluded that there is no panacea for increasing use of preventive services — no interventions were consistently effective for all services, settings, and populations. Multi-component interventions were found to be more effective than single-component interventions. Organizational changes such as standing orders programs were the most effective means of increasing use across several preventive services. (Standing orders authorize non-physicians to administer a preventive service without a physician's exam.) Despite the richness of these findings, their applicability is limited. They do not provide information about which interventions are more effective for vulnerable populations, rural settings, and different types of delivery systems.

CMS must prioritize its improvement efforts in accordance with available resources. CMS has initiated efforts in every state to increase use of influenza and pneumonia vaccinations and breast cancer screening rates, but the rationale behind the choice of services is not clear. Delivery of mammography screening and influenza vaccinations are among the highest of covered preventive services. Because many elderly people receive these services, interventions will target systems and providers that already provide them and individuals who already receive them. Even highly effective, low-cost interventions not targeted at the lowest-use populations or services could represent an inefficient use of resources.

POLICY RECOMMENDATIONS

Partnership for Prevention does not represent any special interest or constituency. We are a partnership of public and private sector organizations committed to finding solutions to health issues in a non-partisan and rigorously scientific manner. Using information from the discussion papers, an advisory committee of experts convened by Partnership selected specific policy recommendations for congressional and administrative action based on the following criteria:

- Strong scientific evidence of the effectiveness and cost effectiveness of specific clinical preventive services and community-based programs;
- The potential to have a significant impact on beneficiaries' well being and the quality of the Medicare program; and
- The political and administrative feasibility of making changes now to the Medicare benefit structure.

Advisory committee members are politically and philosophically diverse and represent many perspectives on the U.S. health care system.

I. Congress should correct the omission of clinical preventive services from Medicare's original benefit structure. Congress should direct CMS to make these coverage decisions based on evidence-based recommendations, such as those of the U.S. Preventive Services Task Force (USPSTF).

Many policymakers are considering proposals to reform Medicare. As reforms to Medicare are considered, Congress should ensure that Medicare measures and holds health plans accountable for delivery of preventive services—an approach pioneered

by leading U.S. employers.

Partnership will respond to specific reform proposals with recommendations based on the proposals' implications for population health.



Policy Recommendations

Several options for making coverage decisions about clinical preventive services are promising. See the Kamerow paper for a critical analysis of these options. Partnership selected a preferred option taking into account administrative costs and feasibility and the ability to keep pace with changes in scientific evidence. Partnership recommends that decisions about Medicare coverage for clinical preventive services be incorporated into the current decision-making process at the Centers for Medicare and Medicaid Services (CMS). As with other types of services, CMS could use the model of the Medicare Coverage Advisory Committee (MCAC), obtaining expert advice about coverage from an MCAC panel on preventive care. This panel should rely on the highly credible clinical recommendations of the USPSTF. **This approach was recommended in a 2000 report by an Institute of Medicine committee examining Medicare coverage for preventive and other services.¹** It would bring the process for making coverage decisions for clinical preventive services in line with decisions for diagnostic and treatment services. Changes to coverage could be made as scientific evidence and the consensus of the USPSTF emerges. Implementing the internal CMS processes would not entail significant new expenditures or reorganization of CMS staff.

Cost estimates are available upon request for four preventive services that would probably be explicitly covered by Medicare if Congress were to direct CMS to make coverage decisions for preventive care. These services include cholesterol screening, depression screening, tobacco cessation counseling, and vision screening. The cost estimates are based on an approximation of the Congressional Budget Office's scoring methodology.

Medicare coverage of specific preventive services is essential; without this coverage, we would expect few beneficiaries to receive the services they need. Ninety percent of Medicare beneficiaries already visit a physician at least once each year. However, physicians working in high-volume primary care practices have difficulty addressing multiple health promotion and disease prevention services while dealing with a patient's primary condition or complaint. Many Medicare beneficiaries are up-to-date for at least one preventive service, but few are receiving multiple services as recommended. Evidence suggests that a recent well care visit is the strongest predictor of all preventive services being up-to-date. A new, complementary approach for delivering preventive services that has potentially substantial benefit and great appeal among seniors is a **"Welcome to Medicare Visit."** See the textbox following these recommendations for a description of the concept.

2. Congress should give CMS flexibility to determine which suppliers and providers can be reimbursed to deliver preventive services, based on rigorous reviews of the most effective and efficient way to deliver services.

Physicians and other clinicians deliver most preventive services, such as immunizations and screening services, in traditional office settings. In others cases, particularly for services aimed at addressing lifestyle issues such as physical activity, injury prevention, or smoking, evidence may indicate that the most effective and efficient delivery approach is outside the traditional physician's office. For example, in time research may indicate that an effective approach for addressing beneficiaries' health risks is a tailored Internet feedback report, following response to a questionnaire, that informs beneficiaries

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about their risks, suggests ways to reduce those risks, and makes referrals to community resources. Research may also find telephone counseling for issues such as smoking cessation to be as effective as face-to-face counseling with a doctor.

More research is needed to identify approaches that will most effectively use Medicare resources to protect and improve health. CMS's Senior Risk Reduction Demonstration and Smoking Cessation Demonstration (described by Omenn on page 14) are excellent steps toward finding this evidence.

3. To ensure that a comprehensive and coordinated strategy to promote health and prevent disease is designed and implemented, the Secretary of Health and Human Services should require greater collaboration on preventive care among the Centers for Medicare and Medicaid Services (CMS), the Agency for Healthcare Research and Quality (AHRQ), the Centers for Disease Control and Prevention (CDC), and other DHHS agencies.

Linking coverage for clinical preventive services with community outreach and education, media, and health care system interventions is necessary to improve service delivery and maximize the services' potential benefits. As described by Fielding and Long, CMS has existing collaborations with other DHHS agencies and is working to improve delivery of some preventive services through these mechanisms, but more leadership and attention to this work is required. Medicare could also be more innovative in addressing lifestyle issues that are important risk factors for disease, such as physical activity, diet, alcohol use, and smoking. In some cases, the most effective interventions are community-based programs that are not supported by Medicare.

Many opportunities exist for AHRQ, CDC and its partners at the state and community levels to complement Medicare's payment for health care services with community-level and health-system level approaches. For example, CMS could collaborate with other DHHS agencies and organizations to **1) promote physical activity classes at local housing authorities and senior centers; 2) educate seniors about the benefits of smoking cessation; 3) improve patient compliance with medications; and 4) assess seniors for risk of falls and assist with simple environmental changes to prevent them.**

Following evidence-based recommendations when they are available will ensure efficient use of limited resources. The Task Force on Community Preventive Services, convened by CDC, complements the work of the U.S. Preventive Services Task Force, convened by AHRQ, by recommending the most effective population-based, rather than clinically-based, strategies to promote and safeguard health, such as policies and laws, education campaigns, and health system-level interventions. Among its current recommendations are approaches for improving delivery of vaccines to older adults.

DHHS agencies should work together, using evidence-based recommendations to select and prioritize approaches that will improve delivery of clinical preventive services to Medicare beneficiaries and protect and improve health through community-level and health system-level programs.

4. Congress should provide support for the development of evidence-based recommendations for clinical preventive services, health system-level interventions, and community-based programs.

The USPSTF and the Task Force on Community Preventive Services are inde-

pendent decision-making bodies convened by DHHS. They are successful public-private sector partnerships that translate complex and often inaccessible scientific literature into prevention practice and policy. Congress should explicitly support and encourage the work of these bodies with sufficient appropriations and promote the use of evidence-based guidelines in policy decision-making, including Medicare policy decisions. This means increased support for this work through the Agency for Healthcare Research and Quality and the Centers for Disease Control and Prevention, respectively, which would ensure that these bodies can keep pace with the rapidly evolving science of prevention and prevention delivery.

5. The Department of Health and Human Services should use all data sources at its disposal to obtain a full picture of beneficiaries' access to and use of clinical preventive services. DHHS should periodically publish a comprehensive analysis for policymakers.

Understanding beneficiaries' access to and use of preventive services is necessary to know where interventions to improve use are required, yet the many data sources at DHHS' disposal are examined in isolation. Together, these data sources could provide a more comprehensive picture and gaps in data could be identified. Medicare claims would provide a good source of information on many beneficiaries' use of preventive services. In addition, population health surveys complement claims data, such as CMS's Medicare Current Beneficiaries Survey, CDC's National Health Interview Survey (NHIS) and Behavioral Risk Factor Surveillance Survey (BRFSS), and AHRQ's Medical Expenditure Panel Survey (MEPS). In addition, the National Committee for Quality Assurance's survey of managed

care plans (HEDIS) collects data on several preventive services delivered by Medicare+Choice Plans. Greater attention should be given to use rates among disabled Medicare beneficiaries, as little is known about their use of preventive care.

6. Due to significant gaps in knowledge, DHHS should make it a priority to sponsor new research at AHRQ, CDC, and the National Institutes of Health for protecting and improving beneficiaries' health:

- Studies are needed that provide information on the specific barriers that the 65+ population faces in accessing preventive services and interventions that work to remove these barriers.
- Similar studies are needed for disabled Medicare beneficiaries and other specific groups of Medicare beneficiaries that have demonstrated lower use of preventive care, such as the frail elderly, minority groups, and individuals living in rural areas and in nursing homes.
- Promising new preventive services need further study to understand their efficacy, safety, cost-effectiveness, and unintended consequences.
- More research is also needed to understand the best approaches, both in clinical settings and in the community, for encouraging lifestyle changes among seniors, such as for moderating alcohol use, eating better diets, increasing physical activity, and ensuring active social networking, all important contributing factors to maintaining health with age.



I- Institute of Medicine. Committee on Medicare Coverage Extensions. Extending Medicare Coverage for Preventive and other Services. Washington, DC: National Academy Press 2000.

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THE WELCOME TO MEDICARE VISIT

It would be valuable to help seniors approach the age 65 milestone with positive attitudes and useful knowledge about Medicare and about promoting good health and preventing disease and injury. A comprehensive "Welcome to Medicare" exam for persons at age 65 could combine an efficient medical evaluation with delivery of screenings and immunizations, and appropriate counseling about health promotion and disease prevention. The visit could also involve an orientation to Medicare and dissemination of information to encourage beneficiaries to make informed choices about providers and plans. Of these elements, only the medical evaluation requires the involvement of a physician. Health behavior and other counseling could be provided by a range of non-physician professionals, including nurses, dietitians, and counselors, who could administer health risk appraisals to tailor messages to the individual.

This visit would **reinforce CMS's current efforts to communicate with beneficiaries about their benefits and responsibilities**. The visit could also **support accountability for the program and its providers and improve quality by collecting data that could be used to monitor performance**. These data could be used to improve individual patient management and to monitor population-level health.

The multiple purposes of the Welcome to Medicare visit differentiate it from the specific clinical preventive services evaluated by the USPSTF. At the same time, it provides a much needed starting point and enhanced focus on prevention to address the very irregular use (documented in the Fielding-Long paper) of specific prevention benefits. Few incentives are in place to encourage health plans to deliver preventive services and keep pre-Medicare adults healthy when the health and financial benefits are more likely to accrue to the Medicare system.

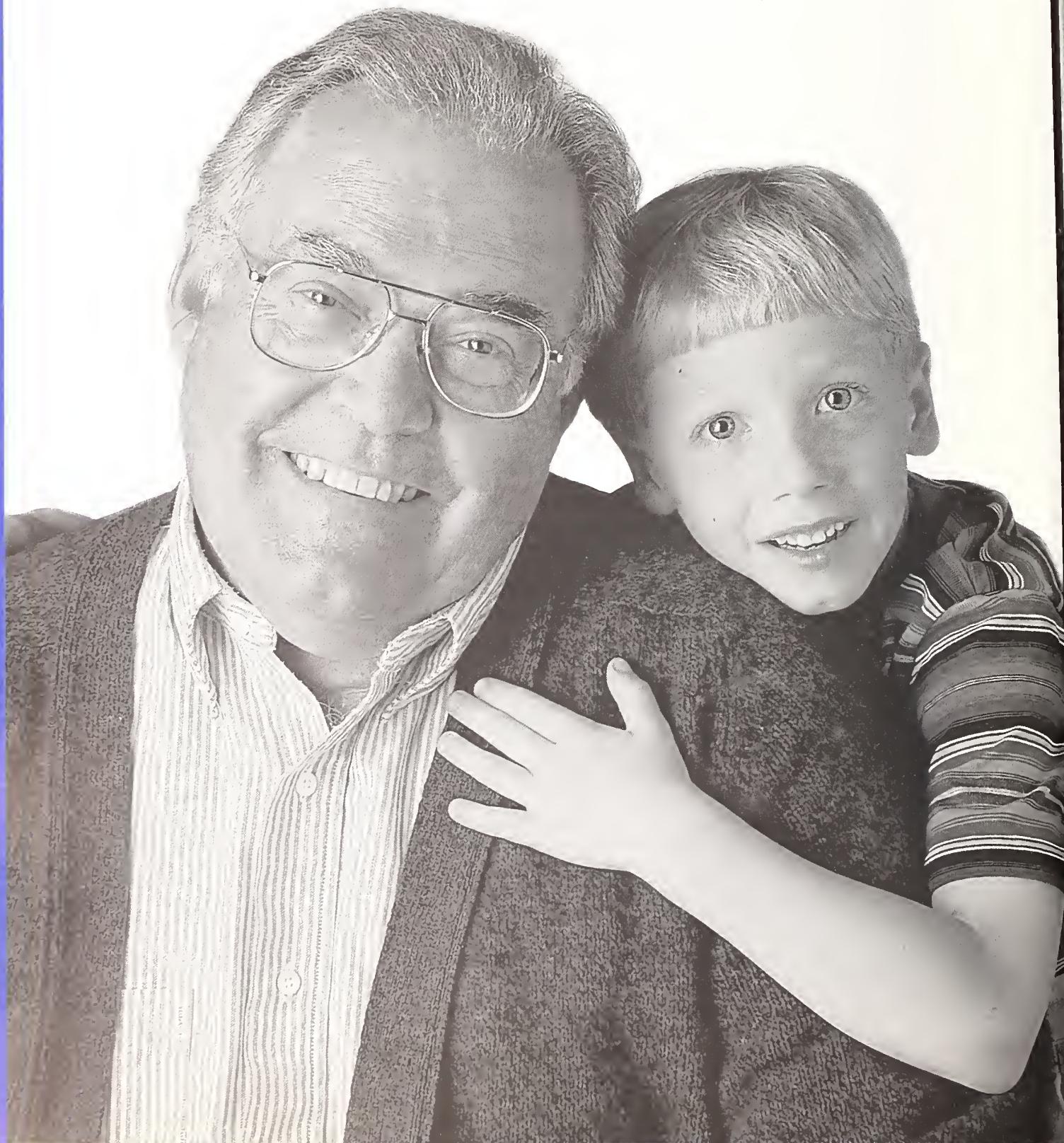
The Welcome to Medicare Visit could make up for deficits in our fragmented, "six minute" health care system by getting seniors up-to-date on their preventive services. **The Welcome to Medicare Visit is designed to initiate a continuum of care for seniors to keep healthy people healthy and reduce risk of disease among the less healthy.** It shifts the focus of patient-provider encounters from the provision of isolated services to the continuing care of beneficiaries.

As summarized by Omenn, CMS conducted multi-site demonstrations on a comprehensive preventive exam from 1989 to 1991. These exams focused on a history and physical exam, laboratory tests, health risk assessment, and health risk counseling. The results were limited but positive: the demonstrations showed modest health benefits and few excess costs. The benefits of these visits were diluted by lack of reinforcement: **as a stand-alone intervention a preventive exam will most certainly have modest independent impact without reinforcement from media, community programs, telephone and Internet services, and other clinical visits over many years.**

Requirements that this exam will actually save money are unrealistic; expectations that it will prevent disease and promote health and quality of life and will be cost effective are reasonable if the Welcome to Medicare visit is reinforced and complemented by other clinical visits and community-based programs over time. Partnership's goal is to ensure that Medicare becomes a program that comprehensively addresses the prevention needs of seniors. We will bring forward, and we encourage others to bring forward, additional information about utilization, direct costs, offsetting benefits, use of non-physicians and other issues in preparation for and during any deliberative hearings.



Historical & Current Policy Issues in Establishing Coverage For Clinical Preventive Services Under Medicare



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Like the current health system, Medicare is tilted toward treating people after they become seriously ill rather than preventing such illnesses. Keeping seniors healthy is far preferable not only for them individually but for the nation as a whole. Seniors living active and productive lives contribute to the economy and to the national well being. By putting more emphasis on disease prevention and health promotion, Medicare could lead the entire health system in that direction; as more resources flow to prevention for pre-Medicare-age Americans, many of the benefits will redound to Medicare.

Social Security (enacted in 1935) and Medicare (enacted in 1965) stand as the most important social legislation of the past century. These two programs provide the foundation for income security and access to health services for eligible beneficiaries, primarily the elderly. Medicare emerged from a decades-long struggle to define the role of the federal government in financing and delivery of health care services. Its history remains highly relevant to current policy debates about two omissions from the program's original benefit structure: clinical preventive services and prescription drugs for outpatients. This paper focuses on the limited coverage of clinical preventive services. Clinical preventive services refer to counseling about unhealthy behaviors; immunizations to prevent diseases; screening to detect diseases at early stages; and "chemoprevention" (or "chemoprophylaxis") with medications, vitamins, or dietary supplements proved to prevent or delay the onset of disease.

Coverage of preventive services was not considered during the passage of Medicare.

The science of health promotion and disease prevention, however, has advanced significantly since Medicare was enacted in 1965. In piecemeal fashion as the scientific evidence for prevention has emerged, Congress has added ten clinical preventive services to Medicare's original benefit structure. However, a comprehensive approach to making science-based coverage decisions for clinical preventive services is lacking, and little is done in communities to promote and complement the work provided by health professionals. Today Medicare remains almost entirely a health insurance program making payments for diagnostic and treatment services once serious illnesses and injuries have occurred.

There are several real and perceived barriers that inhibit Congress from expanding coverage of preventive services under Medicare. Pundits and scholars have raised philosophical concerns that preventive services may disregard individual rights and freedoms to do as one pleases. Constantly evolving scientific knowledge creates uncertainty about the value of some preventive services. In the current fiscal environment, there are concerns about the budgetary impacts of any expansion of Medicare coverage. Since its initial passage, Congress has interpreted the Medicare statute to exclude preventive services from coverage unless specifically excepted. Finally, many specific preventive services do not have strong, vocal constituencies needed to generate support in Congress. Nevertheless, the preponderance of evidence suggests the need to rethink disease prevention and health promotion under Medicare.

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This paper proposes two strategies to improve the payment and delivery of preventive services:

1. Continuing to add coverage for specific, scientifically-justified preventive services one at a time, on the model of linking preventive services to ordinary medical care. This strategy aims to make visits for an illness or for management of a chronic condition a “teachable moment.”
2. Covering a comprehensive visit focused on health promotion and disease prevention, probably utilizing non-physician professionals, together with guidance and reinforcement from the physician, focusing the beneficiary on opportunities for health promotion and disease prevention when that person is not pre-occupied with an acute illness or surgery.

INTRODUCTION

This paper reviews the historical context to explain why preventive services were not included among Medicare benefits originally. It briefly describes the development of a strong scientific basis for health promotion and disease prevention among the elderly and systematic efforts to choose appropriate preventive services for older adults. It identifies and refutes the most common barriers to covering and promoting prevention for older adults, including scientific, philosophical, economic, statutory, and political barriers. Finally, it makes two recommendations to improve prevention efforts for Medicare beneficiaries.

THE ORIGINS OF MEDICARE

Today's universal political support for Medicare belies its controversial origins. Only after debates about the appropriate

role of the federal government in health and health care did Medicare emerge as a compromise, incremental proposal following multiple failed attempts to establish a universal national health insurance program. As early as the Great Depression, policymakers considered national health insurance an option. However, President Franklin D. Roosevelt excluded health insurance from the plan that led to Social Security in 1935 due to fear that physicians and the American Medical Association (AMA) would oppose the legislation.¹

During the Medicare debates of the 1950s and 1960s, medical care was quite different from care today: hospital stays were lengthy; most significant diagnostic tests were done in the hospital; the costs of outpatient drugs were only a small part of medical expenses; there were few available preventive services; and the costs for outpatient care were lower. The high cost of medical care, especially hospital care, was the greatest cause of economic dependency in old age. The health status of the population was also different: life expectancy was shorter in the 1950s than today; more than half the male population and an increasing number of women smoked, leading to high rates of cardiovascular diseases and cancers; and many believed that the diseases of old age could not be prevented.

Linking Medicare and Social Security

In 1951, Secretary Oscar Ewing of the Federal Security Agency (the forerunner to the Department of Health, Education, and Welfare and the Department of Health & Human Services) proposed that the government provide health insurance only for Social Security beneficiaries, rather than the entire population, focused on covering the elderly and the costs of hospitalization.^{2,3}



Passage of Medicare

Many began to see Social Security as a vehicle to provide health insurance to seniors. The slogan “health insurance through Social Security” took root. The linkage to Social Security was crucial in justifying universal coverage for the elderly, rather than only for low-income individuals based on means-testing. The employment-based group insurance model, which had emerged as a benefit for workers under the wage and price controls of World War II, was not appropriate for the elderly. Employer-based insurance was unavailable to this population since they were generally not employed. They used more health services than younger adults and, as a result, insurers charged older adults more than they could afford. Consequently, the elderly required a different model for health insurance.

Passage of Medicare

Even when health insurance was linked to Social Security, Medicare’s passage was not imminent; the following paragraphs summarize the political struggle during the 1960s. The resulting legislation, the Medicare Act of 1965, provided an unprecedented level of protection for America’s elderly; however, many legislators considered the legislation a necessary—but unsatisfactory—compromise.

In 1960, Congress amended the Social Security Act by passing “Medical Assistance for the Aged,” also known as “Kerr-Mills.” Considered the “foot in the door” for federal funding of health coverage for the elderly, this program provided federal and state support of health care for Social Security beneficiaries and older adults considered “medically needy”—those who did not qualify for public assistance, but had large medical expenditures. Under this provision, the federal government covered between 50 and 80 percent of medical

payments (based on state commitment, with poorer states paying a smaller percentage). States were responsible for defining the conditions for coverage, eligibility standards, and the maintenance of facilities, while the federal government role was limited to program oversight. By 1963, only 32 states had implemented this “medically needy” plan and 88% of the funds went to just five states.⁴

This author, then a medical student, recalls how AMA president Edward Annis toured the country in 1962 blasting President John F. Kennedy’s proposal for Medicare, stating that doctors would willingly provide care without charge, or with less than full charges, for those unable to pay. Pro-Medicare incumbents were targeted, but the electoral result was stunning: none was defeated; instead, Democratic supporters of Medicare defeated six incumbent Republican senators. Nevertheless, desperate to appease doctors and ensure their participation, Medicare’s advocates promised to stay out of medical decision-making and reform of the health care delivery system. The AMA even opposed the expansion of Social Security to include cash benefits for the totally disabled, asserting that the government would be getting involved in the medical determinations of disability.

In November 1963, Lyndon B. Johnson assumed the presidency, and in 1964 H.R. 1, the Medicare Act, was introduced in Congress. The LBJ landslide made Medicare’s passage imperative. In a stunning reversal of position, the AMA and Republicans sought to include physicians’ services in their subsidized insurance model. After many weeks of intensive but inconclusive negotiations, House Committee on Ways and Means Chairman Wilbur Mills proposed combining compulsory insurance for hospital care (funded by a separate trust fund within

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Social Security) and voluntary insurance for physicians' services (funded from General Revenues and premiums, rather than the wage-based tax for the trust fund). He also added an expanded version of Kerr-Mills for the poor of any age. Mills moved with military suddenness, enlisting Wilbur Cohen (then Assistant Secretary of HEW) and Robert Ball (Administrator of Social Security) for overnight drafting. The bill passed a month later, "a brilliant tour de force."⁴ Thus emerged Part A and Part B of Medicare, plus Medicaid. The Medicare signing ceremony in July 1965 very appropriately was staged in Independence, Missouri, in the presence of former President Harry Truman, who had campaigned fervently for national health insurance.

The Compromises

Seeds of future conflict were sown in the provisions to pay "usual and customary fees" to physicians and "reasonable costs" (including depreciation) to hospitals and not to interfere with medical practice. Section 1 of Title XVIII proclaimed a "Prohibition against any federal interference.... or the exercise of supervision or control over the practice of medicine."⁵ This language has impeded reform efforts ever since. The overriding objective was to ensure uniform access to affordable, quality medical care, while avoiding an AMA-led provider revolt. Issues such as controlling costs, improving the quality of care, and updating the system to be more patient-friendly—let alone health promotion and disease prevention—were secondary or unanticipated during the original debates.

After all these years, the AMA continues to play a very important role in Medicare, with a lucrative copyright for the basic coding terminology for payment under

Part B.⁶ And the Centers for Medicare and Medicaid Services rely upon private insurance companies as intermediaries and carriers in the various states rather than administering benefits directly.

BENEFIT OMISSIONS

Preventive Services

This history should make clear that preventive services were not explicitly excluded; they were not even considered. The omission partly reflected the general lack of appreciation of preventable causes of illness, the perception that "aging conditions" could not be averted, and the challenge of enacting basic health insurance for this population. At the time, treatment, not prevention, was what elderly Americans needed. Section 1862 of Medicare Title XVIII states, "no payment may be made under Part A or Part B for any expenses incurred for items or services which... are not reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member."⁷

However, the continuing omission of preventive services in the basic statute presents a challenge to the current policy and decision-making environment. Under current statute, Congress must approve coverage for additional preventive services, rather than the Department of Health and Human Services. Legislation is often slow-moving and not always based on the best scientific evidence. Political pressures from disease- or service-specific lobbying groups drive the legislative process, resulting in a patchwork of covered services and confusion for older adults. These challenges suggest that a new model for decision-making is necessary.



Outpatient Prescription Drugs

The omission of outpatient prescription drugs was quickly noted. More than 50 bills to add this benefit were introduced between 1965 and 1969; none passed, reflecting both the concerns over costs and conflicts over whom to include in coverage and how to administer the proposed programs. That impasse continues today.

THE EMERGENCE OF HEALTH PROMOTION AND DISEASE PREVENTION FOR OLDER ADULTS

Until recently, public health and clinical scientists neglected older adults in prevention and treatment trials. For example, the notion was widespread that anyone who had survived to age 65 or 75 after four or five decades of smoking must be "immune" or "resistant." In either case, there was no point in nagging such people to quit. No literature existed on the potential benefits of smoking cessation in the elderly when Hermanson et al. compared survival rates of those who quit smoking with those who continued to smoke. The excess risk of mortality among 65-74 years olds was 70% higher among continuing smokers than among those who had quit. That benefit of quitting smoking was the same as among persons 34-54 and 55-64 years. However, because mortality rates rise sharply with age, a smoking cessation intervention for smokers aged 65-74 would save more lives in the aggregate than the same intervention in younger age groups.⁸ President Bush's budget for fiscal year 1991 prominently cited this study as an example of improving health through research. Based on such evidence, perceptions of older adults' health have changed.

We now have substantial evidence to demonstrate that older adults can benefit from changing behaviors late in life to improve health status, functioning, and quality of life. In fact, as people live longer, they have increased time to benefit from disease prevention and health promotion.⁹ The notion that it is "too late for prevention" has been dispelled by excellent studies of the benefits of smoking cessation, increased physical activity, cancer screening, detection and prevention of depression, and enough other common actions to warrant a comprehensive approach.^{10,11,12} Well-targeted health promotion programs for older adults can also be cost-effective.^{9,13}

Several studies confirm the value of physical activity for improving health among the elderly.^{11,14-17} Physical activity can extend life, help prevent the development of heart disease and colon cancer, mitigate the effects of some chronic diseases such as arthritis or diabetes, improve coordination and flexibility to help avoid falls and fractures, and alleviate depression among older adults. Adults who practice even simple physical activity can improve their health status and use fewer health and social services. Summing up many years of evidence-based analyses at Group Health Cooperative of Puget Sound, Himes reported that there are two overriding determinants of health status for seniors: regular physical activity has a very positive effect on health, while social isolation has a negative impact.¹⁸

Prevention Goals for Older Adults

The translation of the evidence into a national commitment to make measurable progress on health promotion and disease prevention began in 1979 when Surgeon General and Assistant Secretary for Health, Dr. Julius Richmond, issued the first

Prevention and Disease
Control for Older Adults

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report on health promotion and disease prevention, called "Healthy People" and its companion document, "Health Objectives for the Nation, 1990."¹⁹ The commitment to measure the nation's progress in meeting key health indicators has been sustained through several presidential administrations. More than three hundred new objectives were set for the year 2000, and we now have goals and objectives set for 2010.^{20,21} (See the textbox for examples of targets for the elderly.) The active engagement of states, public health, business, labor, disease-oriented organizations and others in the development and monitoring of Healthy People objectives makes it a truly national endeavor.

HEALTHY PEOPLE OBJECTIVES FOR OLDER ADULTS

Healthy People set a 1990 goal of reducing days of restricted activity per year from 36.5 in 1977 to 30 in 1990 for the population 65 and older;²² progress was very good, attaining a rate of 31.4 days in 1990.²³ For the year 2000, Healthy People set a new objective of reducing the percentage of older adults who have difficulty performing two or more personal care activities (bathing, dressing, grooming, eating) from 9.4% to 8% in 2000.²⁰ However, the nation moved away from the target on this objective. Data from 1996 showed 10% of older adults have difficulty performing personal care activities; more current data are unavailable.²³

Another important objective for the year 2000 was to reduce the proportion of older people without teeth from 36% to 20%;²⁰ in 1998, the proportion with no teeth had declined to 29%.²¹ Another objective was to increase pneumococcal immunizations among people 65 and older from a baseline of 15% to 60% by 2000.²⁰ By 1998 progress for all persons had increased to 46%.²¹ However, for black and Hispanic persons, rates had reached only 26% and 23%, respectively.²¹

The Healthy People 2010 initiative includes 26 priority areas for improvement and 467 objectives. For more information, please see www.healthypeople.gov.

Prevention Recommendations for Older Adults

Two important national groups provide recommendations to guide the delivery of preventive services to older adults: the U.S. Preventive Services Task Force (USPSTF) and its counterpart, the Task Force on Community Preventive Services. The USPSTF, which was established by the U.S. Public Health Service in 1984, provides a strong scientific basis for selecting appropriate clinical preventive services for older adults. The USPSTF—a panel of independent experts in prevention and primary care—rigorously evaluates clinical research and develops recommendations on the most effective clinical preventive services, including vaccinations, screening, counseling, and chemoprevention. The pioneering efforts of the USPSTF culminated in the 1989 *Guide to Clinical Preventive Services*, with a second edition in 1996.^{24,25} Currently the USPSTF is addressing new preventive topics, reviewing old ones, and releasing its recommendations periodically, all available on the web. Services recommended by the USPSTF for older adults can be found in Table 2 of the Kamerow paper.

The Task Force on Community Preventive Services, also established by the U.S. Public Health Service, complements the work of the USPSTF.²⁷ This Task Force's mission is to identify the most effective "community-based" or "population-based" strategies to protect and promote health, such as implementing reminder systems to improve delivery of clinical preventive services, providing health education about cancer screenings to a community, or altering the environment to promote walking and biking. Like the USPSTF, the Task Force



Legislative History

rigorously and independently evaluates the scientific literature and makes recommendations that can be adopted by policymakers. To date, the Task Force has issued recommendations to increase the delivery of only one type of clinical preventive service: vaccinations.

Mobilizing both community-based and clinically-based interventions is essential to reinforce positive behavior changes, reduce environmental exposures and mitigate social pressures that influence behavior, and reach a much higher portion of the population, especially low-income and minority populations who exhibit a much higher prevalence of preventable conditions. This "health disparities" challenge—the stark differences in health and access to health care between the total population and some of its subgroups—is the centerpiece of Healthy People 2010.

LEGISLATIVE HISTORY OF THE COVERAGE OF CLINICAL PREVENTIVE SERVICES UNDER MEDICARE

Between 1981 and 2002, Congress added coverage for a number of specific preventive services. (For the year each service was added, see Table 1 in the Kamerow paper.) Currently, Medicare covers ten preventive services. Three are immunizations (pneumococcal, influenza, hepatitis B), and seven are screening tests (five for early detection of cancers, one for osteoporosis, and one for glaucoma). Generally, coverage for these services corresponds to the recommendations of the USPSTF. The prostate specific antigen test (PSA) to screen for prostate cancer is a notable exception; the USPSTF specifically recommended against this test. In December 2002, the USPSTF updated its recommendation and concluded that there is still insufficient scientific evidence to promote routine screening for all men with PSA and

inconclusive evidence that early detection improves health outcomes.²⁸

Most preventive services recommended by the USPSTF for older adults, especially counseling services, are still not covered by Medicare. These services include the diphtheria-tetanus vaccine booster; screening for visual acuity, hearing, depression, and lipid profiles; and counseling about smoking cessation, motor vehicle injury prevention, home and recreational injury prevention, and healthy diet. Some services may be implicitly covered in normal clinic or office visits, but the evidence strongly suggests that more explicit coverage is required.

Between 1965 and 1980, 350 bills for coverage of preventive services were introduced before the first service was added.²⁹ Another 103 bills were introduced during the next decade.²⁹ Two-thirds of the bills introduced were for screening tests and procedures. Bills for immunizations against pneumococcal pneumonia and against hepatitis B required very few introductions before passage, but Representative Cardis Collins (D-IL) introduced a bill to add coverage for Pap smears (to screen for cervical cancer) annually for 15 years before this benefit was added in 1989; similarly, influenza immunization was proposed many times before its passage in 1991. Very few bills introduced have included coverage for counseling services, even though multiple recommended counseling services were included in the Medicare Preventive Services Demonstrations of 1989-1991 (see the next section).

Newly covered services tended to arise from efforts by disease-specific advocacy groups and subsequent action by sympathetic and influential Members of Congress. Bills to cover other preventive services failed for various reasons, including lack of organized political and profes-

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sional support, impact on total Medicare expenditures, lack of consensus on payment and financing mechanisms, and competition from other health-related bills.^{26,29}

Even for those preventive benefits enacted, universal or high utilization remains a challenge. See the Fielding and Long paper for data on current use rates and actions that could improve use.³⁷

The Medicare Preventive Services Demonstrations

The Centers for Medicare and Medicaid Services (CMS) have the authority to conduct experiments in health care delivery and payment. In the Budget Reconciliation Act of 1985, Congress mandated that CMS (then the Health Care Financing Administration, or HCFA) conduct demonstrations to evaluate the effectiveness and cost of coverage for a comprehensive range of preventive services under Medicare, including history and physical exam, laboratory tests, health risk assessment, and risk counseling.³⁰ Preliminary projects were conducted in North Carolina and Massachusetts.

Between 1989 and 1991, five additional sites were organized as demonstration studies (please see Appendix A for a more detailed description of each demonstration project):

- The Baltimore study focused on patients in urban primary care practices.

These demonstrations sought to a) determine whether preventive services and early detection provide better health and higher well-being for Medicare beneficiaries and b) save money. All studies randomized the study population into two groups, one with usual Medicare coverage and the other with additional coverage for preventive services. After the conclusion of the demonstration projects in 1991, participants at all five sites were followed for two more years. Use of preventive services and initial costs (allowable charges) were expected to be significantly higher for the intervention group, due to additional screening and follow-up diagnostic procedures and treatments (as well as the costs of the preventive services themselves). Researchers hoped to see long-term cost savings resulting from the provision of preventive services. However, these long-term savings could not be assessed directly during the study period. Meanwhile there were compelling independent economic analyses indicating that cost-savings were realized only for a few conditions.^{31,32,33}

Results of these demonstrations showed modest, but variable benefit. On the other hand, although there were not significant cost savings, there was little or no excess cost. In retrospect, the demonstration trials had several methodological challenges that limited the power of their findings:

- Researchers in Seattle and San Diego conducted evaluations among enrollees in local HMOs;
- In Los Angeles, researchers followed patients of a University faculty clinic;
- The Pittsburgh study evaluated patients receiving care at regional community hospitals in adjoining rural counties; and
- The interventions were of short duration, offered in the context of a visit to the usual primary care physician, which may have been indistinguishable from a usual care visit;
- The study lacked long-term and community-based reinforcement for healthy lifestyles; and



- The studies occurred during the time that Medicare was adding certain coverages that probably induced higher use among the control groups in the demonstration projects. (At the start of the study, the only preventive services covered under Medicare were pneumococcal pneumonia and hepatitis B immunizations. During the study period, coverage was added for Pap smears, mammography and influenza vaccinations. Special shoes for diabetics were also covered.)

The now defunct Office of Technology Assessment (OTA) summarized the demonstration projects in a general report on policy and research issues.³⁴ A subsequent OTA report during the health care reform debate of 1993 strongly recommended inclusion of coverage for preventive services, independent of the ongoing evaluations of the demonstration projects.³⁵

An evaluation of the mixed results from the demonstration projects did not recommend expansion of preventive benefits to cover a general preventive visit.³⁶ At the time, Congress was preoccupied with a large federal budget deficit.

BARRIERS TO MEDICARE COVERAGE AND DELIVERY OF PREVENTIVE SERVICES

Multiple sources of skepticism and other barriers have limited Medicare's coverage and delivery of clinical preventive services to seniors.

Scientific Skepticism

Specific evidence about what works, what does not, what is safe, and what is not, changes over time. An important example

of changing knowledge is the recent report from the Women's Health Initiative, which found net adverse effects from post-menopausal hormone therapy.³⁹ Proposed new preventive services need careful, well-focused studies on efficacy, safety, cost-effectiveness, and unintended consequences. For example, efforts are underway to identify agents to prevent common cancers.³⁸ The USPSTF provides a credible, sustained effort to evaluate the published literature about the effectiveness of clinical preventive services. The widespread use of "alternative and complementary practices" typically not provided in primary care also deserves scientific study and evaluation, including such treatments as gingko, ginseng, and St. John's wort and yoga and other exercise regimens.

Economic Concerns

Many people mistakenly believe that effective preventive services would save the Medicare program money as conditions such as advanced cancer, hip fractures, and heart attacks are avoided. People with fewer risk factors for disease do have lower Medicare expenditures, but keeping people healthy has a cost.^{18, 40} Health promotion and disease prevention services may lower expenses for many who participate, but still not produce net savings for the whole program.

A hypothetical illustrates this point: suppose a cancer screening service costs \$100. By detecting cancer in its early stage, the screening service might prevent \$25,000 in treatment. To produce net savings, however, screening would have to detect at least one early cancer for every 250 people screened. If cancer were less prevalent (e.g., less than 1 in 250) or if screening were less effective at detecting cancers, the service would have a net cost rather

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than a net savings. Conversely, if treatment costs were much higher, the benefit/cost ratio would be greater. In practice, cancer screening has additional costs to confirm the positive screening test results, making it less likely that the service will produce net savings.

To be fair, the policy question should not be whether preventive services save money, but whether they improve health for a reasonable cost. In other words, cost must be weighed against the health benefits that accrue from the services. This is what is meant by cost-effectiveness analysis, or CEA. CEA is generally expressed as a ratio, which presents the costs of the intervention for a health outcome, such as a study that showed that screening women aged 50 to 69 years every two years for breast cancer with mammography cost approximately \$22,000 per year of life saved.⁴¹ The usual rule of thumb in evaluations of medical and public health interventions is to support those costing up to \$50,000 per quality-adjusted life year (QALY), and challenge those costing more than \$100,000 per QALY. (A QALY is a measure that combines years of life saved with health-related improvements in quality of life.)

Cost-effectiveness analyses of USPSTF-recommended services were reviewed by Coffield et al.¹³ Of the four services recommended only for older adults, vision screening, pneumococcal immunization, and influenza immunization were likely to be cost-saving. Hearing screening for older adults was found to cost approximately \$25,000/QALY. Among other services recommended for all adults, including those 65 and older, tobacco cessation counseling was identified as likely cost saving, and screening for cervical cancer, screening for colorectal cancer, screening

for high blood pressure, counseling about problem drinking, screening for high cholesterol, and mammography all cost less than \$25,000/QALY. Using these criteria, more preventive interventions can be justified and should be undertaken on a population basis. High-quality CEA are valuable in assessing preventive (as well as treatment) services.

Philosophical Objections

Some people object to any activities by government agencies or other people to tell them how to improve their health. According to Mark Twain, "People behave as if nothing so needs reforming as other people's habits!" Certain clinical preventive services, such as tobacco cessation counseling or counseling about problem drinking, are aimed at modifying personal health decisions and habits. Medicare coverage and promotion of these types of services, even though delivered by clinicians in private practice, could indicate the government's strong interest in health behavior changes. Most screening tests and vaccinations, however, do not require long-term behavioral changes.

An overview of the criticisms of government intervention in personal health decisions can be found in a collection of nine papers edited by philosopher and bioethicist Daniel Callahan.⁴² One author argues that people are not equally free, given social and economic context, to shape their behaviors and live healthy lives. Thus, efforts to encourage individuals to make behavior changes are tantamount to "blaming the victim."⁴³ Health promotion and disease prevention is also characterized as discriminatory, particularly by social class: "We excoriate the smoker, but congratulate the skier."⁴³ Overall, people

working to improve health are accused of practicing "healthism" through a "tyranny of health," emphasizing personal health goals over other more humane societal goals, like overcoming poverty, racism, and poor housing.⁴⁴

Although individual autonomy may be a cherished American privilege, the public consequences of private acts and the enormous toll in morbidity and mortality associated with individual behaviors cannot be denied. As Department of Health and Human Services Secretary Joseph Califano wrote in his introduction to *Healthy People*, "Indulgence in private excess has results that are far from private. Public expenditures for health care are only one of the results."¹⁹ Leonard Syme offers an alternative view of prevention, "Effective behavior change... requires we do our best as individuals, but also that we work together with one another to create more healthful and supportive social environments."⁴⁵ From a communitarian perspective, espoused by Amitai Etzioni, individual rights must be balanced with responsibilities to the commons, with recognition of their interdependence.⁴⁶

The Statutory Barrier

Congress has interpreted section 1862 of the Medicare Act (Title XVIII of the Social Security Act) as prohibiting payment for delivery of preventive services.⁷ Section 1862 explicitly commits the Medicare program to pay for services, "that are reasonable and necessary for the diagnosis or treatment of illness or injury, or to improve the function of a malformed body member."⁷ Clearly, Congress has seen fit to circumvent this section with "exceptions," or re-interpret it, for ten preventive services since 1981. Subparagraphs in section 1862 now even delimit the frequency

with which various preventive services can be reimbursed. (For a more detailed discussion of Medicare coverage of preventive services please refer to the Kamerow paper.)²⁶

Over the past two decades, Congress has established a set of measures to slow growth in federal entitlement programs, including Medicare, in order to extend the number of years that these programs will remain solvent. Any expansion of Medicare benefits, such as new preventive services, must meet the criteria of "budget neutrality;" that is, increases in federal government spending must be offset with reductions in spending or increases in revenues, such as through taxes. As a result, it is difficult to extend Medicare coverage service-by-service because Congress must find equal budget cuts or tax increases to offset the projected spending increase. One worthy approach would be to apply cost effectiveness analysis to relatively ineffective treatments.

Political Barriers

The original debate about the appropriate role of the federal government in paying for health care for the elderly continues today. Medicare still operates as a health insurer that provides only limited coverage for low-cost services that people "should be able to pay for themselves." In the ensuing three decades, this argument has been largely settled in the private sector, which covers preventive services for employed persons who are generally far more able to pay than the elderly.

Another reason for political inaction is the uncertainty about the most appropriate or most cost-effective payment mechanisms for preventive services. As recommended by Davis et al, we still need detailed analyses of alternative payment



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schemes for preventive services, including fee-for-service, periodic preventive health visit fee, capitation, and preventive services account.⁴⁷ There are age-specific periodic preventive visit codes included in the Current Procedural Terminology (CPT-4) system for billing; when (most) public and private health insurers do not provide coverage, these bills are paid directly by the patient. National Committee for Quality Assurance audits of health plans and various means of monitoring and providing incentives to physicians to provide appropriate services may be useful in assuring that preventive services are actually provided.⁴⁸

Some major sources of disease and injury, led by the four biggest—cigarettes, alcohol and other drug abuse, guns, and vehicle crashes, are encumbered by political controversy regarding the appropriate role for government intervention. These are eminently preventable sources of carnage and high medical care costs; the public health aspects deserve attention in proportion to their importance.⁴⁹

Behavioral and System Barriers

Many Americans, including the elderly, miss numerous opportunities to receive clinical preventive services. A combination of health system characteristics and individual attitudes contributes to low use rates of preventive services.⁵⁰ As Breslow noted, people's health-related behaviors consist very largely of habit; choice as a daily option plays little role.⁵⁰ Changing behavior patterns involves considerable commotion for the individual, including physiological agitation (e.g., overcoming nicotine addiction withdrawal), psychological stress, social turmoil, or struggles with competing habits and time commitments. Cultural, family, peer, and personal preferences and values are powerful

forces, often in the direction of unhealthy choices. Preparedness for change and action to change require ample reinforcement from multiple quarters. As described by Fielding and Long, characteristics of the health care system and health care providers also significantly influence use of preventive care.⁵¹

POTENTIAL SOLUTIONS

When considering alternatives in the payment and delivery of preventive care to the elderly, there are two alternative, not mutually exclusive, strategies:

- Adding coverage for specific preventive services one at a time, as evidence of effectiveness emerges, on the model of linking preventive services to ordinary medical care, aiming to make visits for an illness or for management of a chronic condition a "teachable moment."
- Covering a comprehensive visit focused on health promotion and disease prevention, probably utilizing non-physician professionals, together with guidance and reinforcement from the physician, focusing the beneficiary on opportunities for health promotion and disease prevention when that person is not preoccupied with an acute illness or surgery.

Bundling and paying for a comprehensive preventive visit may be justified by evidence that preventive services tend to be delivered at higher rates during dedicated visits.⁵¹⁻⁵⁴ However, many people, especially the highest risk people, tend not to come in for preventive visits. Although counseling is the most commonly provided and often most beneficial preventive service during illness visits, health habit counseling is generally not reimbursed when provided outside a preventive visit. Furthermore, in



the high-volume primary care practices so common today, it is unreasonable to expect the physician to address the many recommended aspects of health promotion and disease prevention while taking care of the patient's chief complaint or major chronic condition.

The optimal strategy is likely to be one that would combine the two approaches: continue providing coverage for specific preventive services, whether included in an illness care visit or not, and also cover a comprehensive preventive visit. This utilizes both types of teachable moments, capturing the higher risk people who typically have more healthcare visits anyway, and gaining optimal benefit from both physicians and non-physician healthcare professionals, working as a team, to deliver the comprehensive preventive visit.

The combined approach would reinforce several programs underway at the Centers for Medicare and Medicaid Services. CMS is launching a Senior Risk Reduction Program (SRRP) and a nationwide Smoking Cessation Demonstration (in conjunction with the Robert Wood Johnson Foundation). CMS also is planning demonstration projects to test the impact of community health workers in reducing the incidence of cancers in ethnic and racial groups.⁵⁵

The SRRP emerged from a CMS-commissioned report on health risk appraisal (HRA) programs, part of the broader Healthy Aging Project at CMS. The HRA assesses domains of functional status, clinical preventive services, health status, quality of life, lifestyle risk factors, and behavioral characteristics. HRA programs do not require provider-based assessments and interventions, in contrast to geriatric assessment and disease management. The conclusion is that these programs can help people reduce risk

factors and provide a framework for comprehensively and systematically addressing underlying causes of many diseases. This customized approach has been shown to promote behavior change in studies comparing tailored and non-tailored messages for physical activity, weight loss, and smoking cessation among adults. Computer technology has made it feasible to produce tailored messages for a mass audience at remarkably low cost. Over the next few years, CMS will test two approaches to HRA: (a) tailored materials delivered either by mail or Internet; and (b) tailored materials delivered by mail or Internet plus telephone health coaching, a form of social support. It is likely that the development, contracting, recruitment, intervention, follow-up, and report preparation stages of this project will take several years.

What's the difference between a Health Risk Appraisal and a Preventive Visit?

Health risk appraisal (HRA) is a systematic approach for collecting information from individuals that identifies their risk factors for disease and injury and provides individualized feedback with recommendations for reducing these risks. Individuals can complete the questionnaire at home, at a convenient kiosk, or at a clinic or office visit. Feedback may range from a simple report outlining a person's risks and recommendations to reduce risks, to counseling and referrals, to more extensive interventions such as exercise classes or smoking cessation groups.

Preventive visits are also referred to as "wellness visits" or "periodic health exams" or sometimes "annual physicals." Preventive visits should emphasize clinical preventive services, including immunizations, screening tests, and counseling about behavior changes. Because these visits are not motivated by an illness,

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physicians or nurses have the time they need to focus on prevention, and patients who attend are motivated to consider preventive procedures and health behavior change. Ideally, a preventive visit would include an evaluation of a person's risk and feedback about those risks, perhaps using the HRA approach.

The concept of a comprehensive prevention visit is not new. In 1991 testimony before the House Committee on Ways and Means, representatives of the Association of Schools of Public Health recommended that Congress adopt a population-based view of the health status and health needs of older Americans and implement a "Welcome to Medicare" benefit.⁵⁶

It would be valuable to help older Americans approach the age 65 milestone with more positive attitudes and useful knowledge about Medicare and promoting good health and preventing disease and injury. Careful attention should be given to the best ways to reinforce this single visit over many years, clinically and in the community, since men and women at age 65 can expect to live another 15 or 20 years on average.

It is time to reopen the possibility of a comprehensive health promotion or wellness visit, overcoming the inconclusive demonstrations of a decade ago with a broader appreciation of the need for reinforcement from multiple perspectives. A **"Welcome to Medicare Visit"** could provide a health risk appraisal, identify individual preferences for health promotion activities, and, at the same time, educate beneficiaries about Medicare coverage and the remaining gaps in coverage. Reinforcement by a primary care physician would be highly desirable, but most of the components could be provided by non-physician professionals, including nurses, dietitians, and counselors.

This proposed benefit would combine an efficient medical evaluation, appropriate counseling about health promotion and disease prevention and collection of baseline data for individual and programmatic evaluations. Only the first of these elements of the "Welcome to Medicare Visit" requires the involvement of a physician. Elements of orientation to Medicare and introduction of report cards and other performance measures may empower beneficiaries at a time when they are capable of establishing patterns of care and health habits. The visit could help create a "buzz" about staying healthy and provide a context for the desired utilization of the individual clinical preventive services and community programs.

The Medicare Preventive Services demonstrations of a decade ago demonstrated negligible increases in costs and some benefits (see Appendix A). However, the beneficial effects were diluted by lack of reinforcement from other clinical visits, media, and community programs as well as by the societal context at the time. Older adults are now more receptive to prevention. As a stand-alone benefit, the Welcome to Medicare visit would certainly have limited impact. Instead, it should initiate a continuum of care for Medicare beneficiaries, ensuring that seniors are up-to-date on their immunizations and screening tests and providing a framework for counseling services and self-management of chronic illness and risk factors. This approach captures the "patient-centered" attribute of quality health care advocated by the IOM reports *Crossing the Quality Chasm* (2000)⁵⁷ and *Leadership by Example* (2002)⁴⁸. The idea is to shift from the encounter or the individual service, in isolation, to the continuing care and health status of beneficiaries. The visit would also reinforce CMS's current efforts to communicate with beneficiaries about their benefits and their responsibilities.



CONCLUSION

By 2030, CDC estimates that the number of older Americans will have doubled to 70 million, about one in five Americans. And the proportion of very old (85+) will have grown much more rapidly. Thus, actions that keep people healthy longer and add life to years rather than just years to life are likely to become socially and politically very attractive. The questions will remain, however, whether the responsibility lies with the society and its government or should be left to individuals. At a minimum, the government is expected to provide credible information for individual and community decision-making.

In 1995, Senator Bill Frist outlined his vision for the future of Medicare, "In the future we will see a dramatic shift toward

disease management and prevention, which hold great potential not only for alleviating human suffering, but also for reducing costs....People will monitor their own health and communicate with providers through electronic mail, video conferencing, and on-line self-help groups."⁵⁸ As clinical information systems become more widely used and more patient-centered, tracking patients over time and across their care settings, both providers and patients and their families should be much more readily able to keep current on their individualized preventive services and clinical treatment programs.^{48, 57} This vision of the future is hinged on completely rethinking Medicare's coverage of preventive services and its role in improving the health of older Americans.

Conclusion

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APPENDIX A: FIVE MEDICARE DEMONSTRATION PROJECTS

Baltimore

In Baltimore, 4,195 Medicare beneficiaries were randomized. The 2,105 persons in the intervention group received mailed vouchers for one free preventive visit per year to their own primary care physicians; 63% used the voucher one or more times in the two years. Physicians were expected to cover all recommended services of the USPSTF; they received a payment of \$145 for this visit.⁵⁹

Contrary to expectations, the total Medicare allowable charges and Part A and Part B utilization were slightly lower for the intervention group than for the control group in both the first year and the second year. A subsequent paper documented modest positive change in health behaviors, less rapid decline in the Quality of Well-Being score, but little overall difference in health status or Medicare charges during two additional years of follow-up.⁶⁰

Pittsburgh

The Pittsburgh rural demonstration project randomized 3,884 individuals age 65-80 years (37% of the population in the recruitment area), after all had completed a comprehensive health risk appraisal, into a control group and two intervention groups, one with capitated payments to the local hospital and the other with fee-for-service payments to the primary care physician (about 1,300 people were in each group). Voluntary participation in various elements of the program varied from 17 % for the smoking cessation program to 58 % for the immunizations.

There were no differences between groups with respect to participation in screening programs or alcohol or smoking cessation programs; beneficiaries assigned to the fee-for-service group were more likely to be immunized and to attend a nutrition program, while those assigned to the hospital capitation group were more likely to have a dementia/depression evaluation. There were no detectable differences in rates of hospitalization for pneumonia, stroke, or heart attack, cholesterol levels or use of lipid-lowering drugs, or overall survival rates. Regardless of group, participants in the study were much more likely to use preventive services (vaccinations, Pap smears, mammography) than those who declined to join the study.⁶¹

San Diego

The San Diego demonstration with 1,800 beneficiaries featured an 8-week, 16-hour workshop series on "Growing Younger" and "Growing Wiser". Individuals selected their counseling emphasis and goal: 42% chose increased physical activity; 12%, increased consumption of vegetables, 11%, reduction in blood pressure; 9%, maintenance of current habits; and 8%, reduction of dietary fat. After four years, those who had this brief intervention had better health behavior practices, more stretching activity, lower body mass, less depression, and higher immunization rates than the control group.⁶²



Los Angeles

The Los Angeles demonstration with 1,900 beneficiaries found that over 70% of those invited to attend a screening and health promotion clinic visit did so. Attendees had higher self-reported health status than those who did not (only 16% of those considered "frail" attended). The health behaviors and practices of attendees were similar to those of non-attendees, i.e. there was no bias toward attracting those already practicing health promotion.⁶³

Seattle

The Seattle demonstration, called "A Healthy Future" at Group Health Cooperative of Puget Sound, enrolled 2,558 beneficiaries. One-half received a package of USPSTF-recommended services, health risk appraisal, and opportunities for health promotion and disease prevention visits with their primary care physicians and nurses, which were widely utilized. Only 30% took advantage of exercise or "planning ahead" classes. The active intervention group showed increased physical activity, improved diet, enhanced self-efficacy, and increased use of living wills. However, utilization and health care costs were not different between the two groups at 2 and 4 years of follow-up. There was an unanticipated increase in deaths during the follow-up interval for those 75 years of age and older, possibly related to special attention to the use of advance directives.^{64,66}

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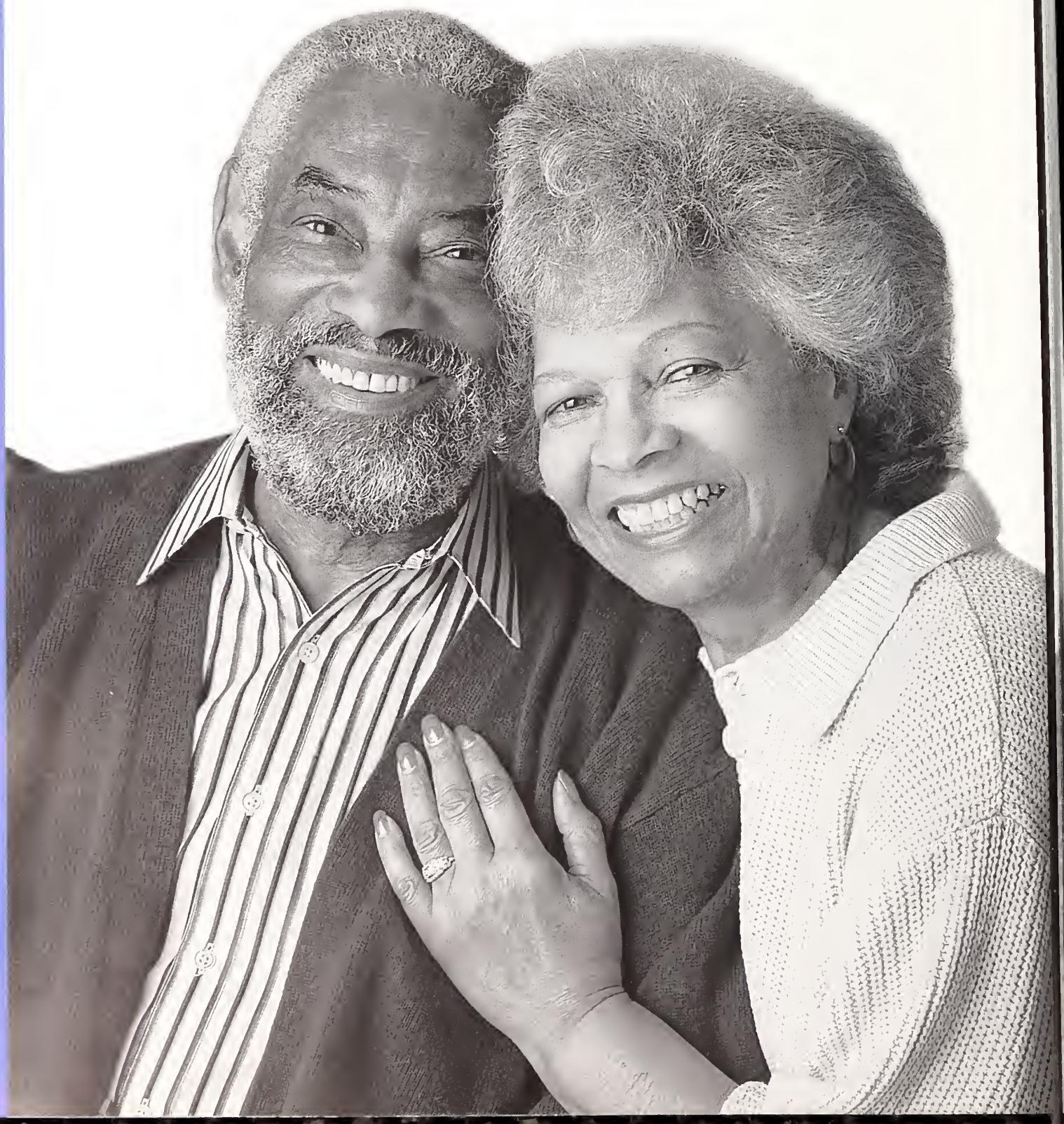
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How Should Medicare Cover Preventive Services? A Policy Analysis



Executive Summary

Executive Summary

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There are four types of clinical preventive services: screening tests, such as mammography, detect disease in its earliest stages; immunizations, such as flu vaccine, prevent disease by shots; counseling, such as for smoking cessation, educates and trains patients about risky health-related behaviors; and chemoprevention, such as aspirin, helps to prevent disease by taking medication. There is strong evidence that certain clinical preventive services are effective in reducing morbidity and mortality, and it has also been shown that insurance coverage for these services is a key to their being used.

Medicare is America's health insurance for the elderly and disabled, administered by the Centers for Medicare and Medicaid Services (CMS). It does not routinely cover clinical preventive services as it does other medical care. Congress must pass a law for Medicare to cover any preventive interventions, such as Pap smears, colorectal cancer screening, or shots to protect against pneumonia. Because of this difficult requirement, it is not surprising that in the 37 years since Medicare was instituted only ten conditions currently have preventive services that are covered by Medicare. And, as evidence accumulates about the value of specific preventive services, the gap between what is proven effective and what is covered by Medicare widens.

Not all preventive services are effective in preventing or delaying disease. Groups such as the federally-convened U.S. Preventive Services Task Force (USPSTF) carefully review the evidence for and against these services and routinely

publish recommendations based on evidence. USPSTF recommendations are regarded as "conservative," because they only endorse a preventive service if there is clear evidence both that the test or shot or behavior change improves health and that the service can be delivered effectively in the health care setting. Many health plans and professional societies base their policies on the recommendations of the USPSTF.

When USPSTF preventive care recommendations are compared to what is currently covered by Medicare, we find that only about half of the strongly recommended services are covered. Examples of USPSTF-recommended but uncovered services include hearing and vision screening; smoking cessation counseling; blood lipid (cholesterol) screening for heart disease; screening for depression; and tetanus booster shots. All of these services have a proven ability to prevent morbidity and/or mortality; some were ranked at the top of a recent independent assessment of preventive services for cost-effectiveness and the amount of disease burden that can be prevented.

There are several alternatives that Congress could consider if they wished to move coverage of preventive services to a routine basis. Options include:

- Mandating that coverage be tied to the recommendations of a specific outside group, such as the U.S. Preventive Services Task Force;

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- Creating a “fast-track” system, in which Congress must decide on an expert-recommended set of services that are periodically placed before them;
- Incorporating preventive services into the current system of CMS national Medicare coverage determinations, either by a reinterpretation of Medicare law or by new legislation;
- Covering only screening tests, using a rulemaking change;
- Creating a Medicare preventive services voucher program; and
- Retaining the status quo, where Congress must approve any changes in coverage.

Advantages and disadvantages of these options are discussed, considering which would be easiest, quickest and least costly to implement, and which would result in a new system that covers only services that have been proven to safeguard and improve older adults’ health.

Costs and cost-effectiveness must be considered when discussing any added services for Medicare coverage. Many believe that preventive services, if effective, are cost saving. Actually, effective preventive services in most cases do have a net cost, and that cost must be weighed against the health benefits that accrue from the services. This is what is meant by cost-effectiveness analysis (CEA). If a service is found to be cost-effective, it does not mean that it saves money, only that the money it costs is thought to be a sound investment. CEA is generally expressed as a ratio, which presents the costs of the intervention per a defined health outcome. For example, one study found that screening women every three

years for cervical cancer cost \$14,000 per year of life saved, a very good investment. High-quality CEA are very valuable in assessing preventive (as well as treatment) services.

INTRODUCTION

Clinical Preventive Services

Clinical preventive services are interventions delivered by health care professionals designed to prevent or detect diseases before they can sicken or kill patients. The four types of clinical preventive services are:

- Screening tests, such as Pap smears and mammography, where disease is detected in its early stages so that it may be treated and often cured;
- Immunizations, such as flu shots and measles vaccine, in which diseases are prevented by the administration of one or more shots;
- Counseling, such as for smoking cessation or sexually transmitted disease prevention, in which patients learn how to change their health-related behaviors to eliminate risk factors and prevent disease; and
- Chemoprevention (or chemoprophylaxis), the use of medications, vitamins, or dietary supplements such as aspirin or calcium to delay or prevent the onset of disease.

Preventive care is often categorized into three levels. Primary prevention, which includes immunizations, counseling, and some chemoprophylaxis, is intended to prevent or delay the onset of disease and occurs before the disease process has started. Secondary prevention, including most screening tests, identifies asymptomatic



disease early in its course, when treatment is often most effective and sometimes curative. Tertiary prevention is delivered to patients with established diseases, in an attempt to minimize illness and disability.

Research shows that many clinical preventive services are effective in preventing disease and prolonging life.¹ This includes preventive care for persons aged 65 and older, who comprise the vast majority of patients with Medicare coverage in the United States.^{1,2}

History of Medicare Coverage of Clinical Preventive Services

When Congress created Medicare in 1965, it provided insurance coverage only for diagnostic and treatment care:

“No payment may be made under part A or part B [of Medicare] for any expenses incurred for items or services which...are not reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member...”³

This has been consistently interpreted as excluding coverage of any primary and secondary clinical preventive services (counseling, immunizations, and screening tests in asymptomatic patients). Tertiary preventive services, because they are provided to patients who have been diagnosed with a disease, have usually been covered by Medicare.

In 1965, evidence for the effectiveness of preventive care had not been systematically reviewed, and there was little demand that these services be covered. But beginning shortly after Medicare was enacted, and continuing at a growing rate, bills were introduced in Congress to add various preventive services to Medicare coverage. Initially, most bills addressed vision,

hearing, and dental benefits. By the late 1970s, scores of bills were being introduced annually to cover a wide range of preventive services—cancer and hypertension screening, nutritional counseling, and immunizations.⁴ For years, none of these bills passed both houses of Congress. After 25 years of Medicare and the introduction of 350 unsuccessful bills to cover various preventive services, Congress approved coverage for Medicare’s first preventive service in 1980: pneumococcal pneumonia immunization, for which coverage began in 1981. Over the next 20 years, a small number of clinical preventive services have been added to Medicare, each time through legislation. Currently, preventive care is covered for ten conditions.

CLINICAL PREVENTIVE SERVICES IN MEDICARE

Currently Covered Services

Table I lists the ten conditions for which Medicare Part B (outpatient services) covers preventive care, detailing the specific covered service(s) along with who is covered, at what frequency, and at what cost to beneficiaries.

In primary prevention, three immunizations are covered—for pneumococcal pneumonia (1981) and influenza (1993) for all Medicare beneficiaries and for hepatitis B (1984) for patients at medium and high risk of that disease. No primary prevention counseling interventions are covered, although self-management training for patients with diabetes, a tertiary preventive service, was added in 1998. Because Medicare does not cover outpatient medications (except in selected Medicare+Choice managed care plans and for chemotherapy), no chemoprophylactic agents are currently covered.⁵

How Should Medicare Cover Preventive Services? A Policy Analysis

Table 1—Clinical Preventive Services Currently Covered by Medicare Part B

Target Condition	Covered Service(s) and Year Coverage Began	Medicare Beneficiary Population Covered	Frequency and Cost to Patient
Pneumococcal pneumonia	Pneumococcal pneumonia vaccine (1981)	All	Once, or repeat if needed; no copay or deductible
Hepatitis B	Hepatitis B vaccine (1984)	Those at medium and high-risk	3-shot series; 20% copay after \$100 deductible
Cervical cancer	Pap smear (1990)	All women	Every 24 mo, high risk every 12 mo; 20% copay, no deductible for pelvic exam and Pap collection; no lab copay or deductible
Vaginal cancer	Pelvic exam (1998—includes clinical breast exam)	All women	Every 24 mo, high risk every 12 mo; 20% copay, no deductible for pelvic and breast exam
Breast cancer	Mammography (1991) and clinical breast exam (1998—see vaginal cancer above)	Women age 35 and over	1 baseline age 35-39, then every 12 mos; 20% copay, no deductible
Influenza	Influenza vaccine (1993)	All	Once a year; no copay or deductible
Osteoporosis	Bone mass measurement (1998)	Those at high risk	Every 24 mo, or more frequently if necessary; 20% copay after \$100 deductible
Colorectal cancer	Fecal occult blood test (1998)	All age 50 and over	Every 12 mo; no copay or deductible on test
	Flexible sigmoidoscopy (1998)	All age 50 and over	Every 48 mo; 20 or 25% copay after \$100 deductible
	Colonoscopy (1998)	All	Every 10 y, every 24 mo if high risk; 20 or 25% copay after \$100 deductible
	Barium enema (1998)	All age 50 and over	Instead of flexible sigmoidoscopy or colonoscopy; 20% copay after \$100 deductible
Prostate Cancer	Prostate-specific antigen test and digital rectal exam (2000)	All men over age 50 (i.e., 50 plus 1 day)	Every 12 months; no copay or deductible for PSA test; 20% copay after \$100 deductible for exam
Glaucoma	Screening exam by an eye doctor (2002)	Those at high risk	Every 12 months; 20% copay after \$100 deductible



Screening tests, secondary prevention for the early detection of disease, are covered for five cancers—cervical (1990) breast (1991), and vaginal (1998) for women, prostate (2000) for men, and colorectal (1998) for all beneficiaries 50 and over. For high risk-patients, screening for osteoporosis (1998) and glaucoma (2002) are also covered.⁵

Evidence-based Preventive Services Recommendations

Intuitively, clinical preventive services have always had value, and major professional and advocacy groups have long recommended routine screening tests as part of the periodic health examination.⁶ In a landmark review of the evidence behind preventive care recommendations, Frame and Carlson⁷ pointed out in 1975 that few screening tests had strong evidence to support their routine use in preventing disease and promoting health. The Canadian Task Force on the Periodic Health Examination introduced a methodology for evaluating clinical preventive services and published the first comprehensive, evidence-based prevention recommendations in 1979.⁸

Five years after the Canadian Task Force publication, the U.S. Assistant Secretary for Health convened the U.S. Preventive Services Task Force and charged them with developing preventive care recommendations for Americans. Using a methodology based on the Canadian process, the USPSTF published its *Guide to Clinical Preventive Services* in 1989.⁹ During the 1990s, “evidence-based medicine” became a movement, and recommendations for preventive care—whether from professional societies, advocacy groups, or health plans—increasingly documented the research behind them. The USPSTF continued to issue reports, with a second edition of the

Guide in 1996,¹ and subsequent updates published in journals and on the Internet.¹⁰

Currently, although comprehensive preventive care recommendations are available from a wide range of sources, the USPSTF is the best respected and most independent source of guidance. As one managed care organization physician wrote recently, the USPSTF

“...represents a neutral third party, basing recommendations on medical evidence and the potential to reduce disease burden while minimizing potential harm, unbiased by the impassioned and potentially self-serving advocacy of public and professional groups on one hand and the economic pressures of managed care organizations competing in today’s health care marketplace on the other.”¹¹

Because of its independence, rigor, and government imprimatur, the USPSTF recommendations are a good benchmark with which to compare the set of clinical preventive services covered by Medicare.

Comparing Medicare Coverage and USPSTF Recommendations

Table 2 compares USPSTF recommendations for preventive care for persons 65 and older with clinical preventive services currently covered by Medicare.

Medicare covers most of the immunizations recommended by the USPSTF, with the exception of diphtheria-tetanus booster, which is generally recommended every five to ten years.

Although the USPSTF is considered to be “conservative” in its recommendations, and Medicare does cover screening for five conditions recommended by the USPSTF, there are at least four conditions

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Table 2—Comparison of USPSTF-Recommended and Medicare-Covered Clinical Preventive Services

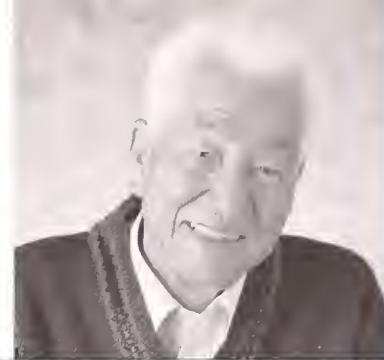
Immunizations	Recommended by USPSTF AND covered by Medicare	Pneumococcal pneumonia vaccine Hepatitis B vaccine Influenza vaccine
	Recommended by USPSTF and NOT covered by Medicare	Diphtheria-tetanus vaccine booster
Screening tests	Recommended by USPSTF AND covered by Medicare	Pap smears for cervical cancer Mammography for breast cancer Bone mass measurement for osteoporosis Multiple screening tests for colorectal cancer Eye doctor screening exam for glaucoma
	Recommended by USPSTF and NOT covered by Medicare	Eye chart screening for visual acuity Screening for hearing impairment Blood lipid screening for increased levels Screening for depression
	Covered by Medicare and NOT Recommended by USPSTF	PSA and digital rectal exam for prostate cancer Pelvic exam for vaginal cancer
Counseling	Recommended by USPSTF and NOT covered by Medicare	Tobacco cessation Healthy diet for high-risk patients Motor vehicle injury prevention Household and recreational injury prevention* Sexually transmitted disease and HIV prevention* (* Lesser level of evidence; see "case study")
Chemoprevention	Recommended by USPSTF and NOT covered by Medicare	Aspirin for cardiovascular disease (discussion) Tamoxifen or raloxifene for women at high risk of breast cancer (discussion)

(vision, hearing, increased blood lipids, and depression) recommended by the USPSTF for which Medicare does not currently cover a separate screening intervention.

There is no Medicare coverage for primary preventive counseling interventions, despite strong evidence (and USPSTF recommendation) for the effectiveness of tobacco cessation counseling. In addition, the USPSTF recommends counseling to prevent motor vehicle injuries and, with lesser enthusiasm, counseling for a number of other conditions. None of these is covered by Medicare.

Because Medicare does not cover outpatient pharmaceuticals, it cannot cover chemoprevention. The USPSTF, however, strongly recommends patient discussion (i.e., counseling) about aspirin for the prevention of heart disease. It also recommends discussion of chemoprevention of breast cancer with women who are at high risk for that disease. In both cases, neither the medications nor the counseling is covered by Medicare.

Thus, 37 years after Medicare was instituted, after the introduction of literally hundreds of pieces of legislation to add preventive services, Medicare



covers roughly half of the preventive care that authorities recommend for this age group. Included in the uncovered services are two—smoking cessation and vision screening—that were recently prioritized as the top two adult preventive services for cost effectiveness and health impact.¹² Given the potential for decreasing death and disability that these preventive services have, and the fact that lack of insurance coverage has been shown to be a barrier to use of clinical preventive services,^{13,14} this is not a very satisfactory record.

In addition, we are moving into an era when it is likely that there will be an increasing number of effective preventive services for older adults and the disabled. With advances likely in chemoprevention and genetically targeted preventive interventions, the current slow system that depends on congressional action for any changes will lead to an ever widening gap between what preventive care Medicare covers and what is appropriate. Something needs to change.

OPTIONS FOR DETERMINING MEDICARE PREVENTION COVERAGE

Six options for making Medicare coverage decisions for clinical preventive services are listed in Table 3 and discussed below. All of these except the first and the fifth would require Congressional action to become effective.

I. Retain the Status Quo

Retaining the current system, in which every addition to preventive service coverage requires congressional legislation, has the advantage that no changes, admin-

istrative or legislative, are required to accomplish it. It also ensures that the budgetary impact of newly proposed preventive services is carefully evaluated, as the Congressional Budget Office must “score” all bills to estimate their cost. Finally, it allows Congress to continue to control directly which preventive services are and are not covered.

On the other hand, the present system is slow and inefficient—it has taken hundreds of unsuccessful bills and almost four decades to achieve coverage for about half of what experts consider the appropriate set of preventive services. It is subject to political and commercial pressure to cover services that advocacy groups favor, often ignoring scientific evidence. Adding preventive services piecemeal leads to the current inconsistent and confusing set of conditions that apply to covered preventive services. Some services are subject to copayments, some are not; some are subject to deductibles, some are not; in some cases part of the service is subject to these charges and other parts are not (see Table 1 for details). It is no wonder that beneficiaries are perplexed and don’t take maximum advantage of services that are covered.

Also, there currently is no provision for regularly revisiting preventive services that are not covered (or those that are) when new evidence emerges. Finally, most members of Congress do not have the expertise to determine which specific screening tests, immunizations, and counseling interventions should or should not be covered by Medicare. This would seem to be a set of decisions best left to health care coverage experts.

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Table 3—Options for Medicare Coverage of Clinical Preventive Services

	Option	Type of Change Needed	Final Coverage Decision-Maker	Strengths	Weaknesses
1	Retain status quo	None	Congress	No changes needed; all new coverage decisions “scored” by Congressional Budget Office	Slow; inefficient; subject to political lobbying; not evidence-based; results in uneven set of service-related factors (copays, deductibles)
2	Mandate coverage tied to a specific outside group’s recommendations	Legislative	Outside body	Rapid; evidence-based; has process for continuous updating; Congress would no longer have to assess individual preventive services	No precedent for ceding federal coverage decisions to an outside group (which could decide without public scrutiny); great political pressures on the outside group; doesn’t consider difference between scientific evidence review and coverage policy-making
3	Create Congressional “fast track” system	Legislative	Congress	Requires regular evidence review by outside bodies, set timeframe for adoption; allows Congressional endorsement, but not modification	Could be slow; up-or-down vote requirement risks throwing out good with bad, or approving bad with good; “fast-track” rules might lead to cursory debate
4	Incorporate prevention into regular coverage process	Legislative	CMS with guidance from AHRQ	Could be incorporated into current system with little modification; evidence-based; allows public input; more timely than current system	Removes sole authority from Congress in this area
5	Cover only screening tests by a rulemaking change	Administrative	CMS	Could be done without legislation; could be incorporated into current system with little modification; evidence-based; allows public input; more timely than current system	Reverses decades of precedent; would only work for screening tests, not for immunizations or counseling; removes sole authority from Congress in this area
6	Create a preventive care voucher program	Legislative	Medicare beneficiaries	Places patients in charge of their care; budgeting would be predictable	Not evidence-based; some beneficiaries might choose inappropriate services and not choose appropriate ones; might lead to increased fraud and abuse

2. Mandate Coverage Tied to an Outside Group’s Recommendations

Another possibility is to remove the service-by-service coverage decision making from Congress and mandate that Medicare simply follow the recommendations of a respected authority in preventive care, such as those of the U.S.

Preventive Services Task Force.¹ This would have the advantage of quickly bringing Medicare policies into agreement with scientific evidence for preventive service effectiveness. It would relieve Congress from having to assess the merits of individual preventive services. It would provide for an ongoing process of continually reviewing and updating recommenda-

tions as new evidence becomes available. It would lead to little or no increased administrative costs for the federal Centers for Medicare & Medicaid Services (CMS), which runs Medicare. There is some precedent for this type of arrangement, as many insurance companies and health plans base their preventive services coverage on USPSTF recommendations. In fact, *The New York Times* recently reported that “[the USPSTF’s] recommendations are generally adopted by health plans and insurers.”¹⁵

No precedent, however, exists at CMS for ceding coverage decisions to an outside body. CMS staff and Congress would likely be resistant to a policy that leaves them powerless in deciding how federal dollars are spent. In addition, the considerable political pressures for preventive service coverage now focused on Congress would likely be directed at the USPSTF. As an independent, government-supported body that does not meet in public and is not required to follow the regulations of the Federal Advisory Committees Act, it would have great difficulty dealing with the intensive lobbying that would inevitably occur. Also, this option would have no built-in cost controls. The USPSTF has not routinely considered costs when determining whether to recommend a new service, although it has recently begun to evaluate cost-effectiveness analyses on preventive services.¹⁶ (See the section below on costs, cost-effectiveness, and preventive services.) Finally, there is a recognized difference between stating the scientific evidence for and against a service and creating a coherent and defensible coverage policy. Many considerations affect coverage decisions. They include evaluating the scientific evidence, but also include assessing the patient population, provider capabilities, current practices, patient demand, costs, and other issues.

3. Create a “Fast-Track” System for Congress to Periodically Consider Preventive Services

One way to continue to allow Congressional oversight and decision making for Medicare preventive services while increasing the likelihood of evidence-based recommendations would be to create a new “fast track” system for coverage. Such a system is envisioned in a bill introduced in the just-concluded (107th) Congress.¹⁷ The bill requires the Institute of Medicine, in consultation with the USPSTF and others, to report every three years on recommended preventive services. Congress would then have a limited time—60 days—to debate and vote the recommendations up or down, but could not modify them. If Congress did not act within the 60 days, the legislation would be enacted.

This process would have the advantage of requiring regular review of the evidence for and against coverage for specific preventive services. It would force Congress to act speedily on recommendations that had been made by authorities in the field. And it would use a system that has worked before for controversial, highly charged decisions—determining base closings for the Department of Defense—and has been found to be constitutional.

It would allow for changes only every three years, however, and sometimes new evidence about preventive services emerges more rapidly than that. The requirement for a straight up or down vote might lead to rejection of a whole package of services because one is unpopular. The quick passage provision might preclude thorough debate on specific services. And the financial implications of this plan are unspecified.



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4. Incorporate Preventive Care Coverage Decisions into the Current System

Implementation of most Medicare coverage policy is conducted at the local or regional level, by Medicare carriers and intermediaries. They may issue local medical review policies to provide guidance on coverage policies for the public and medical community in their area. CMS currently uses administrative processes to create a relatively small number of national coverage determinations (NCDs), when staff feel it is necessary to have a consistent nationwide coverage policy because of controversy, conflicting carrier policies, significant new advances, program integrity questions, or other reasons.¹⁸ In 1998, CMS (then HCFA) established the Medicare Coverage Advisory Committee (MCAC) to advise the Secretary of Health and Human Services and CMS staff whether specific medical items and services meet Medicare coverage criteria for being “reasonable and necessary.”¹⁹ The MCAC has an executive committee and several topic-specific panels, which conduct open meetings to debate and make recommendations for NCDs on diagnostic imaging, durable medical equipment, medical and surgical procedures, and other topics.

CMS could begin to issue a series of NCDs on preventive care. This could happen only if Congress authorized CMS to begin to cover clinical preventive services in the manner that it already covers diagnostic and treatment services. Once coverage authority for preventive services was established, CMS could obtain expert advice and recommendations for prevention coverage decisions either from a newly convened MCAC panel on preventive services or from a

third party, such as the USPSTF. There is precedent for seeking such outside advice. CMS currently contracts with the Agency for Healthcare Research and Quality (which supports the activities of the USPSTF) to supply technology assessments to help inform NCDs.

One advantage of such a system would be that the mechanisms necessary to implement it—the NCD process and the MCAC (and/or AHRQ contracting)—are already in place and functioning. New regulations would not need to be issued, saving time and expense. It would also fit nicely into the current coverage system for treatment and diagnostic services that ensures careful, scientific evaluation of candidate services and allows for both public scrutiny (through open meetings and posting of documents on the web) and CMS final decision making. Although some new administrative staff might be necessary to implement this option, it would not entail dramatic new expenses or major reorganization of CMS coverage processes and staff.

Another advantage of treating preventive care like other services is that the emphasis shifts from asking what it costs to asking whether it is effective (preventive) care. And Medicare beneficiaries would benefit from a more timely and evidence-based process of covering preventive services. This option was recommended in a 2000 report by an Institute of Medicine committee examining Medicare coverage for preventive and other services.²⁰

It would, of course, mean that Congress no longer would have sole authority to determine Medicare preventive service coverage. Congress could continue to legislate specific coverage of any preventive service(s), just as it occasionally does now



for individual treatment services. Also, Congress could request that IOM report periodically on Medicare's performance in covering preventive care. Another change would be that the built-in cost analyses accompanying legislation would not necessarily be performed if preventive services began to be evaluated in the same manner that treatment services are.

5. Cover Only Screening Tests by a Rulemaking Change

Without Congressional intervention, CMS could, through a rulemaking process, reverse its longstanding policy and stipulate that all screening tests would henceforth be defined as diagnostic tests and therefore would become eligible for coverage under Section 1862 of the Social Security Act.³ As with option 4 above, this would also allow CMS to cover screening tests using National Coverage Determinations, with the advice of the MCAC, but it would not apply to other types of preventive care—counseling and immunizations—which would still require legislative change. It would thus be only a partial solution to the problem of timely and evidence-based preventive care coverage under Medicare.

6. Create a Preventive Care Voucher Program

Congress could give each Medicare beneficiary a voucher to “purchase” a set amount of preventive services, either annually or over a longer period, such as five years. This could include a Medicare periodic health examination, which is currently not covered. The periodic health examination could be covered once, on enrollment in Medicare, or at a specified frequency, and its costs could either be subtracted from the voucher or paid in addition to it.

This alternative would have the advantage of putting Medicare beneficiaries in control of their preventive care, allowing them to pick the screening tests, immunizations, and/or counseling that were most important to them. Because there would be a ceiling for annual or periodic prevention expenditures, it would be easier to budget for such a program. The Medicare+Choice program medical savings accounts are a precedent for this type of financial arrangement, which allows the beneficiary to control the services paid for with the benefit.

Disadvantages include the likelihood that some beneficiaries might choose services that are not effective or not appropriate for their risk factors. As a new program, it would take time to develop administratively. Use of the vouchers would likely be low initially, while beneficiaries and providers became educated about and accustomed to the program. And the vouchers' value might not be set high enough to cover the full range of services recommended by the USPSTF.

Additional questions about a voucher system include how to deal with preventive services already covered by Medicare—would they be included in the voucher system or separate from it? How would Medicare assure that patients could access the preventive services they wanted? Would there be a limit on administrative costs, which might be significant? Who would define the content of a covered periodic health examination? And what safeguards would be necessary to prevent fraud in the use of the vouchers?

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Counseling Services: A Case Study of Why Preventive Care Coverage Decisions Should be Made by Expert Evaluation of the Evidence

Risky health-related behaviors—including tobacco use, lack of exercise, overeating, and unsafe sexual activity—are responsible for an enormous amount of morbidity and mortality in the U.S.²¹ The first edition of the USPSTF Guide to Clinical Preventive Services concluded that:

“...among the most effective interventions available to clinicians for reducing the incidence and severity of the leading causes of disease and disability in the United States are those that address the personal health practices of patients. Primary prevention as it relates to such risk factors as smoking, physical inactivity, poor nutrition, and alcohol and other drug abuse holds generally greater promise for improving overall health than many secondary preventive measures such as routine screening for early disease.”^{9, p.xxii}

Despite their importance and desirability, preventive care counseling interventions to change patient behaviors pose problems for insurance coverage. These problems include defining exactly what “counseling” comprises and determining what constitutes evidence of effectiveness for counseling interventions in practice.

Counseling coverage standards can be compared to those for immunizations and screening tests. Defining a shot or a screening test is usually straightforward. Specifications are unambiguous and not subject to variability or broad interpretation. The service consists of a single blood draw, imaging procedure, or vaccination. It is not dependent on delivery by a specific provider. Billing codes and standard fees for these services usually exist, and all that needs to be determined for coverage is patient eligibility and allowable periodicity.

Such is not the case with counseling. First, the definition of a counseling or behavior change intervention must be decided. What is the content of the session? How long does it last? How many sessions are necessary? Then, the counselor must be specified. Who does the counseling? Is specific provider training or certification required? All of this must be established for each preventive counseling service—smoking cessation, safe sexual behavior, healthy diet, etc. Determinations need to be made as to whether certain topics can be combined to create a counseling session, say injury prevention in the home and in motor vehicles. Finally, and most problematically, policies must be made on whether repeat courses of counseling are allowed. Do smokers get a single four-session shot at counseling, or can they get it as often as need it if they start smoking again? Do dieters get three tries at weight reduction, or more? Or fewer? Given these issues, it is no surprise that preventive counseling interventions are much less frequently covered by insurance than screening tests or immunizations.

Another part of the problem is the lack of evidence for the effectiveness of behavior change counseling interventions when delivered in health care settings. Although the USPSTF methodology is sophisticated, employing complex analytic frameworks to map the evidence supporting interventions,²² this aspect of it can be summarized relatively easily. For screening tests to be judged effective, a two-part question must be answered positively. First, is there good evidence that the candidate screening test detects the disease in question accurately? Second, is there good evidence that this early detection improves outcomes for the disease (i.e., decreases morbidity and/or mortality rates)? The question of the quality of the actual delivery of the screening test is not usually a problem. We generally know what we mean by (or can easily set standards for) a Pap smear, a blood lipids panel, or a mammogram.



This is not the case for counseling interventions. Here, the two key questions become:

1. Is there good evidence that the behavior change in question (stopping smoking, wearing seat belts, etc.) leads to improved health outcomes? and
2. Is there good evidence that counseling interventions in clinical settings can lead to these behavior changes?²³

Usually, far more convincing evidence supports an affirmative answer to the first question than the second. This leads to a methodological problem for the USPSTF and a practical one for health plans and insurance companies trying to decide what to recommend and/or cover.

The USPSTF has struggled with this problem since its first report in 1989, and its methods of dealing with it when making recommendations have changed over the years. Counseling to promote tobacco cessation and physical activity provide two contrasting examples. We know that stopping smoking leads to improved health outcomes, and an extensive literature on smoking cessation counseling provides strong evidence for the effectiveness of behavior change counseling in clinical settings.²⁴ As a result, smoking cessation counseling has been strongly recommended in all editions of the USPSTF's *Guide* and is increasingly covered by health plans and insurance companies.

Although there is also strong evidence that regular physical activity can help prevent heart disease, diabetes, obesity, and hypertension,²⁵ there is not clear evidence that counseling interventions in clinical settings can lead patients to exercise.²⁶ This has made it very difficult for the USPSTF to make a clear recommendation. In its first report, in 1989, it recommended regular physical activity counseling for all patients despite conceding that there was

a "limited amount of information regarding the ability of physicians to influence the exercise behavior of patients."^{9, pp.299-300} In the second edition of its *Guide*, in 1996, the USPSTF continued to recommend regular physical activity counseling, but this time they added the qualification that the recommendation was "based on the proven benefits of regular physical activity; the effectiveness of clinician counseling to promote physical activity is not established."^{1, p.611} And recently for the third *Guide* edition, the USPSTF gave a new "I" (for insufficient evidence) recommendation for physical activity counseling, recommending neither for nor against it in primary care settings.²⁷ It is not surprising that very few plans and insurance companies cover counseling to promote physical activity.

There are, however, a few precedents for covering counseling services in Medicare. Since 1998, Medicare has covered self-management training for patients with diabetes. It includes education about self-monitoring of blood glucose, diet, exercise, and insulin. Medicare sets the curriculum for the program and reimburses qualifying providers. A smoking cessation benefit demonstration program is just beginning in seven states, testing three different types of smoking cessation services: provider counseling only, counseling plus nicotine replacement therapy, and a telephone quit line plus nicotine replacement therapy.²⁸ Finally, CMS now covers nutrition counseling for patients with diabetes and end-stage renal disease,²⁹ although this is a treatment service for patients with these problems, not a preventive service.

In summary, counseling has been treated differently than other clinical preventive services, both because it is more difficult to define precisely and because the evidence has been weaker. However, when the evidence for counseling effectiveness is good, as it is for smoking cessation counseling, health plans and other carriers have a clearer understanding of what is effective: what kinds of counseling, at

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what frequency, and by which types of providers. As a result, smoking cessation counseling is increasingly covered throughout the U.S.

COSTS, COST-EFFECTIVENESS, AND PREVENTIVE CARE COVERAGE

The most important question to ask when evaluating a preventive service is whether or not it is effective. This is what groups such as the U.S. Preventive Services Task Force spend the bulk of their efforts determining. Especially in preventive care, when services are delivered to asymptomatic patients, it is important to know that the service will improve the lives of patients who receive it, at least in the aggregate. This is done by systematically weighing the benefits obtained from the preventive intervention against the possible harms that may result from it. It is the basis for the methodology the USPSTF and others use to evaluate candidate services.²²

But costs must also enter into the picture. Clinical preventive services, like all medical services, cost money, whether for a vaccine, a mammogram, or time spent counseling. Some immunizations and a few other preventive services may actually return more dollars in health care costs averted than the costs of the intervention.³⁰ But despite the old adage that “an ounce of prevention is worth a pound of cure,” preventive care rarely saves money. In most cases, effective preventive services are like treatment services: costs are incurred to achieve a return in improved health. But how do you measure these costs and benefits?

Several methods are available to assess the costs of preventive (and, in general, medical) services. A gross cost analysis calculates the cost of a service or screening

program, without considering its benefits. Cost-benefit analysis compares the cost of prevention to the dollar value of the health improvement that it achieves, usually expressed as a cost-benefit ratio. The problem with this is that it must assign a dollar value to life, which is a very difficult (and somewhat questionable) thing to do.

Cost-effectiveness analysis (CEA) is the most sophisticated of these methods, for it takes into account both the net cost of the intervention as well as the health improvement that the intervention achieves. CEA is usually stated in terms of dollars spent per health outcome unit achieved. For example, a CEA found that screening women for cervical cancer every three years costs about \$14,000 per year of life saved.³¹ A further refinement of CEA adjusts the denominator to reflect changes in the quality of life that is saved, because people value time when they are ill differently than time spent fully healthy. The result, called cost-utility analysis (CUA), usually measures costs per quality-adjusted life year, or “QALY,” saved. This is especially helpful in capturing the benefits of interventions that improve quality of life without necessarily extending life, like vision or hearing screening. An example of CUA is a study that found that improving childhood vaccine delivery in developing countries cost less than \$25 per QALY.³² CEA and other tools to measure costs and benefits are discussed in detail in publications aimed at professionals³³ and policymakers.³⁴

CEA is a very useful tool in evaluating preventive care. Recently the USPSTF listed ways in which it will employ CEAs when making recommendations (see Table 4). In these cases, CEA helps to refine the analysis, whether it is through comparing two different services for the same



condition or evaluating the impact of a preventive service on different populations or when delivered with a different periodicity. CEA can make explicit the trade-offs involved in choosing among different preventive strategies.

No specific dollar amount indicates that services are no longer “cost-effective,” although many experts consider services that cost \$50–75,000 or less per QALY to be good values. It does not follow, however, that this is the only criterion that needs to be met to determine whether a service is valuable or not, for a number of reasons. First, high-quality CEAs are not available for many services. There are also numerous methodological issues in the performance of CEAs, including lack of standardization; varying quality; differing preferences expressed by patients; and different perspectives taken by analyses (e.g., considering only an insurance company’s costs and benefits versus those of society at large). Also, many people have ethical concerns about the use of CEAs to ration health care.¹⁶

Whether CEA should be used in assessing preventive services for Medicare coverage is an important question. Because preventive services considered for Medicare coverage must be approved by Congress, they are all “scored” by the Congressional Budget Office to show how they would affect spending over a five-year period.³⁵ This scoring, a form of cost analysis, is different from a CEA. It operates only from the perspective of costs to the Medicare program. It does not consider costs borne by patients or their families. It does not account for quality of life improvements attributable to the intervention. This scoring allows Congress to adhere to its policy of explicitly sanctioning all new costs it adds to entitlement programs.

Interestingly, such costing criteria are not used for the Medicare coverage decisions of treatment services made by CMS staff. CMS policy is that new treatment services will be covered if they are equal or superior to existing covered services for the same purpose. And providers may charge

Table 4—Uses of Cost-Effectiveness Analysis by the U.S. Preventive Services Task Force

Use	Example
Quantifying the differences between two or more effective services for the same condition	Comparing fecal occult blood testing, sigmoidoscopy, and colonoscopy for colon cancer screening
Illustrating the impact of delivering a given intervention at different intervals, ages, or to different groups	Determining the optimal interval between cervical cancer screening tests
Evaluating the potential role of new technologies	Assessing the costs and benefits of BRCA1 and BRCA2 gene screening for breast cancer
Identifying key conditions that must be met to achieve the intended benefit of an intervention	Factoring the value of increased compliance with a costlier medication into an analysis
Incorporating preferences for intervention outcomes	Considering women’s values for various cancer outcomes and preventive medication side effects

Adapted from Saha, et al¹⁶, p.37

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more for a newly covered surgical procedure or medical treatment than for an existing one if they can demonstrate that it achieves superior results. It seems unfair to hold preventive services to a specified standard of cost-effectiveness, when the same is not true for treatment and diagnostic services.

That said, in a world of ever-increasing health care costs, these issues will inevitably be important, especially if a change is considered that will lead to increased coverage of preventive services. Several options are available to Congress to better understand the costs associated with newly approved services of all kinds, whether counseling or screening tests in prevention or more traditional treatment or diagnostic services. CBO-type budget scoring may be done. CEA's or other more sophisticated analyses may be commissioned. Pilot studies with careful cost accounting may be performed.

Table 2 identifies USPSTF-recommended clinical preventive services that are not currently covered by Medicare. The costs to Medicare of covering some of these effective preventive services, such as screening for elevated blood lipids, vision problems, and depression, as well as smoking cessation counseling, have been estimated and are available upon request from Partnership for Prevention. When compared to current expenses, bringing Medicare up to modern standards of care by offering effective clinical preventive services would mean a minor increase in costs for a very large benefit to Medicare beneficiaries of improved health from preventive care.

CONCLUSION

Clinical preventive services—immunizations, screening tests, counseling to change at-risk health behaviors, and chemoprevention—save lives and decrease morbidity. Insurance coverage of preventive services has been shown to increase their use. The current system of congressional piecemeal legislation to cover each preventive service has resulted in only half of widely recommended services being covered. This is likely to get worse as the pace of discovery and development of new tests and treatments continues to increase. It is hard to understand today why Medicare does not have a routine mechanism to cover preventive care.

Several options exist for Medicare to cover preventive services. All depend on Congress acting to close this embarrassing gap in the health care we provide to our older and disabled citizens. Well-proven counseling interventions, such as smoking cessation counseling, should be among the covered preventive services.

Including preventive care will increase Medicare costs, but by an amount that is both small in comparison with current Medicare expenditures and more than compensated for by a return in healthy years of life.

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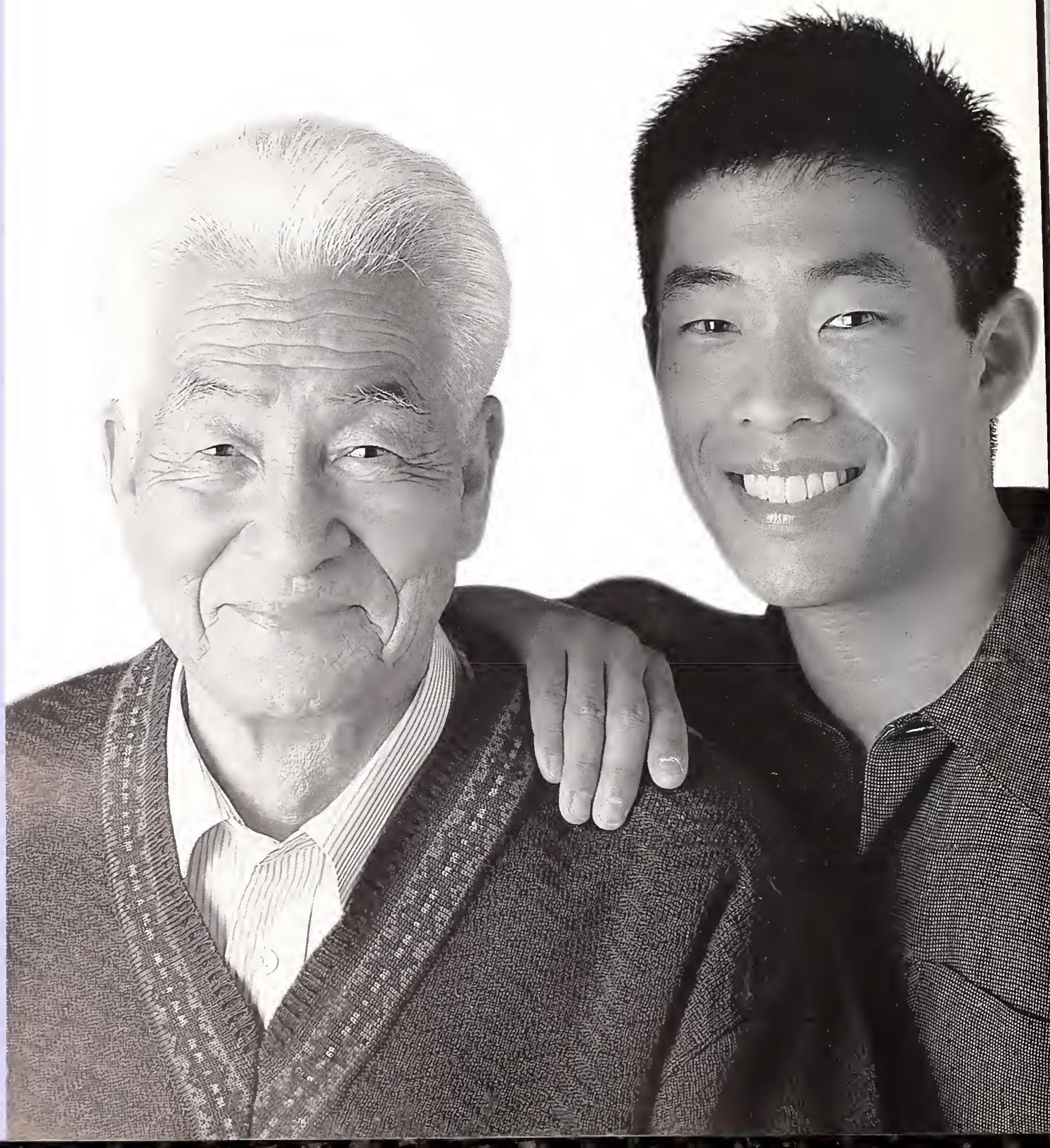
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Increasing Use of Clinical Preventive Services among Medicare Beneficiaries





Executive Summary

Millions of Medicare beneficiaries do not receive recommended clinical preventive services that have been found to reduce mortality and improve health. Significant improvements in the use of preventive services by Medicare beneficiaries have occurred during the past decade, but current use rates fall short of national objectives. Although the majority of Medicare beneficiaries receive at least one preventive service within the recommended interval, few are up-to-date on the full range of recommended preventive services. In 1999, for example, 91 percent of women over 65 were up-to-date for at least one preventive service, but only 10 percent had received screening for cervical, breast, and colorectal cancer and immunizations against the flu and pneumonia within the recommended time frames. Also, disparities in use of preventive services exist among states and between racial and ethnic groups and among seniors with different income and education levels. In 2001, for example, 58 percent of African Americans received an influenza vaccine in the past year compared to 68 percent of whites and 74 percent of Asians.

A number of related factors determine use of preventive services, including the policy environment, the organization of the health care system, and characteristics of health care providers and patients. The federal government has invested in a number of activities to understand what influences use rates for preventive care and how best to improve them. The Centers for Medicare and Medicaid Services, the Centers for Disease Control and Prevention, and the Agency for

Healthcare Research and Quality each make contributions, but do not appear to be part of a single comprehensive plan.

To determine what works to improve use of preventive services at what cost, several federal agencies have sponsored reviews of the evidence. These reviews concluded that no single magic bullet will increase use of preventive services—no interventions were consistently effective for all services, settings, and populations. Multi-component interventions were found to be more effective than single-component interventions. Organizational changes such as standing orders programs were the most effective means of increasing use across several preventive services. Despite the richness of these findings, their applicability is limited. They do not provide information about which interventions are more effective for vulnerable populations, rural settings, and different types of delivery systems.

CMS must prioritize its efforts to improve use of preventive services in accordance with available resources. CMS has initiated efforts in every state to increase use of influenza and pneumonia vaccinations and breast cancer screening rates, but the rationale behind the choice of services is not clear. Mammography screening and flu vaccination have the highest use rates among covered preventive services. Because many seniors currently receive these services, interventions will target systems and providers that already provide them and individuals who already receive them. Even highly effective, low-cost interventions not targeted at the lowest-use populations or services could

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represent an inefficient use of resources. A more systematic approach is needed to prioritize among preventive services and interventions to increase use based on clinical effectiveness, cost-effectiveness criteria, and current use rates.

The collection of data is essential to assess the use of covered services and to identify disparities in use rates. Thus, the regular collection of national and state population-level data on the use of all Medicare covered services should be a top priority. Particular attention should be given to use rates among disabled Medicare beneficiaries, as little is known about their use of many preventive services.

Due to significant gaps in knowledge, additional studies are needed to provide information on the specific barriers that seniors face in accessing preventive services and interventions that work to remove these barriers. Similar studies are needed for disabled Medicare beneficiaries and other specific groups of Medicare beneficiaries that have demonstrated lower use of preventive care, such as the frail seniors, African Americans, Hispanics, and individuals living in rural areas and in nursing homes.

USE OF PREVENTIVE SERVICES

Many beneficiaries do not receive the preventive services that Medicare currently covers. Despite significant improvements in the use rates for preventive services in recent years, current use rates fall short of the objectives set for the nation.¹ Moreover, wide disparities in use persist among different preventive services, different racial and socioeconomic groups, and among states. Significant gaps in use remain, for example, between whites and racial and ethnic minorities, high- and low-income individuals, and persons with more

and less formal education. National data collection has not kept pace with Medicare's coverage expansions, however, leaving gaps in our knowledge of the use rates for several Medicare-covered services.

In addition to Medicare claims data, several major national population health surveys such as the Behavioral Risk Factor Surveillance System (BRFSS), the National Health Interview Survey (NHIS), and the Health Plan Employer Data Information Set (HEDIS) regularly collect data about the number, percent, and characteristics of Medicare beneficiaries who receive a number of preventive services. The BRFSS is an annual state-based survey which contains questions about health insurance coverage and the receipt of flu and pneumonia vaccines; breast, cervical, prostate, and colorectal cancer screening; blood pressure and cholesterol screening; and provider counseling about tobacco, alcohol, diet, and physical activity. The NHIS is a nationally representative survey containing a number of questions about demographic characteristics, health insurance, health behaviors, and health care utilization, including the use of certain preventive services. HEDIS collects data for a series of indicators from health plans that contract with CMS to provide services to Medicare beneficiaries. As of 2002, HEDIS collects information about mammography, flu and pneumonia vaccinations for adults over 65, and colorectal cancer screening.

Current Use Levels

Screening for colorectal cancer is the least used of the covered clinical preventive services by Medicare beneficiaries over age 65.² In 2001, one-half (50 percent) of Medicare beneficiaries had ever received a home fecal-occult blood test (FOBT) to detect colorectal cancer, but only 26 percent reported using one within the past year.² (Figure 1) Only four in ten (44 percent) reported receiving either a sigmoidoscopy or colonoscopy within the



five past years.² In contrast, three-quarters of all female Medicare beneficiaries had received a mammogram within the past two years (75 percent) and a Pap smear within the past three years (72 percent).² Two-thirds of Medicare beneficiaries over age 65 had received a flu vaccination within the past year and 60 percent had ever received a pneumonia vaccination.² Despite inconclusive findings by the U.S. Preventive Services Task Force (USPSTF) regarding its effectiveness, two in three (63 percent) male Medicare beneficiaries had received a PSA test for prostate cancer within the past year.³

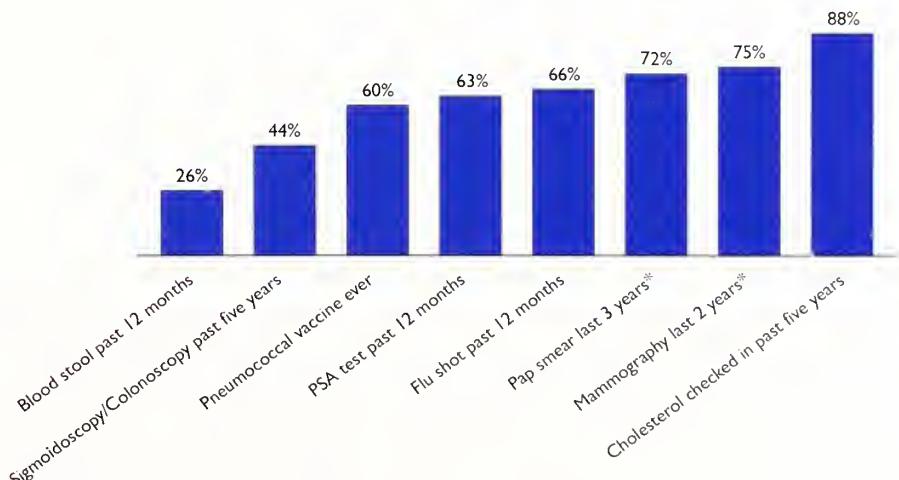
Data from the BRFSS also indicate that other preventive services are integrated as a part of routine medical care for seniors. Although not explicitly covered by Medicare, the majority of beneficiaries over 65 reported in 2001 that they had their blood pressure checked within the past 2 years (98 percent) and had their

cholesterol checked (88 percent) at least once in the past five years.⁴ These use rates are higher than any of the clinical preventive services explicitly covered by Medicare.

Trends in Use Rates

Use rates for certain covered services increased significantly between 1995 and 2001 while others remained relatively constant.⁵ The percentage of adults over age 65 who had ever received the pneumococcal vaccine increased from 38 percent in 1995 to 60 percent in 2001.² (Table 1) The percent of women over 65 who reported that they had received a mammogram within the previous two years increased from 66 percent to 75 percent between 1995 and 1999.² In 2001, two in three (66 percent) Medicare beneficiaries over 65 reported that they had received a flu shot within the past year up from 60 percent in 1995. Cervical cancer

Figure 1: Percent of Medicare Beneficiaries over Age 65 Using Selected Clinical Preventive Services, 2001



*Data for Pap smear and Mammograms are from 1999 because few states included questions about these services in 2001.

Source: Authors' analysis of Behavioral Risk Factor Surveillance System, 2001.

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Table 1: Use of Selected Clinical Preventive Services by Medicare Beneficiaries Age 65 and Older, 1995 to 2001

Service	1995	1997	1999	2001
Percent who have ever received pneumococcal vaccine	38	46	55	60
Percent who have received influenza vaccine within the previous year	60	66	67	66
Percent of women who have received a Pap smear to detect cervical cancer within the previous three years	70	71	72	N/A
Percent of women who have received a mammogram to detect breast cancer within the previous two years	66	72	75	N/A

N/A: Complete use data are not available for 2001 for these services.

SOURCES: United States General Accounting Office. Medicare: Beneficiary Use of Clinical Preventive Services. Washington, DC: US General Accounting Office. (2002) and Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Data, 2001.

screening rates remained level during this period, increasing from 70 to 72 percent.²

State Variation

Medicare coverage levels are uniform across all states, but the use of preventive services varies widely among states. These state-level differences in use may reflect variation in demographics; beliefs, attitudes, or knowledge of the senior population; characteristics of the health care system; the distribution and organization of health care providers or some other factors.

Nationally in 2001, 54 percent of Medicare beneficiaries over age 65 reported ever receiving either a sigmoidoscopy or colonoscopy exam, according to 2001 BRFSS data.⁴ Only 43 percent of beneficiaries in Kentucky or Louisiana had ever received either service compared to 70 percent of beneficiaries in Minnesota.⁴ In 2001, less than half (45 percent) of Medicare beneficiaries age 65 and over living

in the District of Columbia received a pneumococcal vaccine.⁴ In contrast, seven in ten Medicare seniors in Montana had received the vaccine.⁴ (Figure 2)

In 1999, three-quarters (75 percent) of all female Medicare beneficiaries over age 65 reported having had a mammogram within the past 2 years, yet 94 percent of older women in Delaware had received one.⁴ Overall, seven in ten women over 65 (72 percent) had received a pap smear within the past three years compared to 95 percent of women in Arizona.

States exhibit different patterns of use across preventive services. For example, Delaware consistently ranks near the top of all states in use rates for every preventive service reported in the BRFSS while Louisiana ranks near the bottom of states across all services. Other states exhibit a mixed profile. For example, Hawaii has among the highest rates for delivery of the flu vaccine, but among the lowest delivery rates for the PSA test.⁴



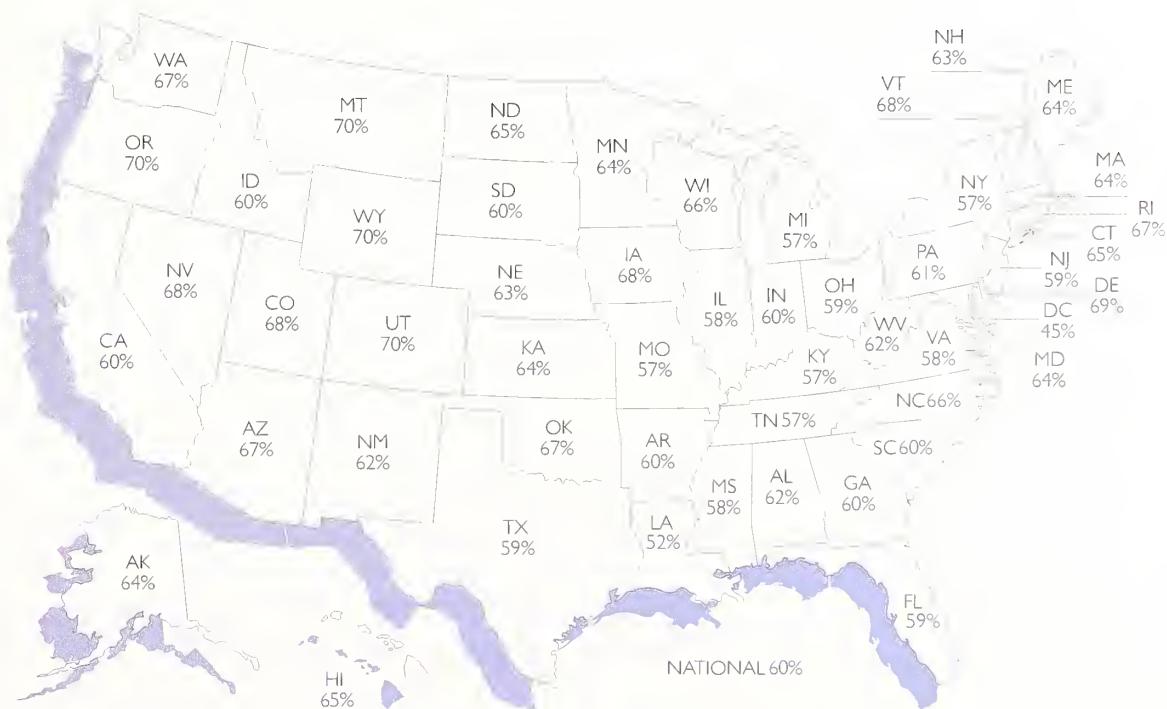
During the 1990s, in Delaware, Maryland and Kentucky use rates for mammography, cervical cancer, and colorectal cancer screening for adults as well as flu and pneumococcal vaccinations increased significantly among older adults.⁶ In contrast, Alaska use rates for these preventive services did not improve significantly.⁶

Racial/Ethnic, Income, and Educational Differences in Use

Even among preventive services with high overall use rates, disparities persist among different racial and ethnic groups, income levels, and educational levels. In 2001, only one-half (50 percent) of African American beneficiaries received

an influenza vaccine compared to 68 percent of whites and 74 percent of Asians.⁴ (Figure 3) Individuals with higher incomes were more likely to have received preventive services within the recommended guidelines than individuals with lower incomes. In 2001, 57 percent of male Medicare beneficiaries with an income of less than \$25,000 annually had received a PSA test within the past year compared to 70 percent of beneficiaries with incomes greater than \$25,000.⁴ Income differences in use rates are important given that 40 percent of Medicare beneficiaries have incomes below twice the poverty level (\$17,720 for individuals and \$23,880 for couples in 2002). Educational differences are also pronounced. In 2001, only 20 percent of

Figure 2: Percent of Medicare Beneficiaries over Age 65 who Have Ever Received Pneumococcal Vaccine, by State 2001.



SOURCE: Authors' analysis of Behavioral Risk Factor Surveillance System, 2001.

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beneficiaries with less than high school education had used a FOBT within the past year compared to 30 percent of individuals with at least some college education.⁴

Use of Multiple Preventive Services

Use data also highlight some of the difficulties in getting Medicare beneficiaries to obtain all of the covered clinical preventive services. The recent GAO study found that many Medicare beneficiaries have received at least one preventive service within the recommended interval, but few beneficiaries are up-to-date for all of the recommended preventive services.² In 1999, 91 percent of older women had received at least one recommended, covered preventive service, but only 10 percent of women were screened for cervical, breast, and colorectal cancer, and immunized against the flu and pneumonia according to USPSTF recommendations.² Likewise, the majority of older male beneficiaries (78 percent) had received either the pneumococcal or flu vaccine or colorectal cancer screening according to USPSTF recommendations, but only one in ten men (11 percent) had received all of three services at the recommended intervals.² Similar to the patterns for individual service use, whites, individuals with higher educational attainment, and higher incomes were more likely to receive all three preventive services than minority men and men with lower educational and income levels.

Medicare+Choice

In 1997, Congress adopted Medicare+Choice (M+C) as a mechanism to modernize the program. As of July 2001, 5.1 million Medicare beneficiaries were enrolled in managed care plans under

the M+C program.⁷ Initially, Medicare beneficiaries enrolled in M+C plans were more likely to receive broader coverage of prescription drugs and preventive benefits and have lower cost-sharing requirements than were fee-for-service (FFS) beneficiaries.⁷ However, many M+C plans have since left the market and many of those that remain have reduced their benefit levels and increased cost-sharing for beneficiaries.⁷

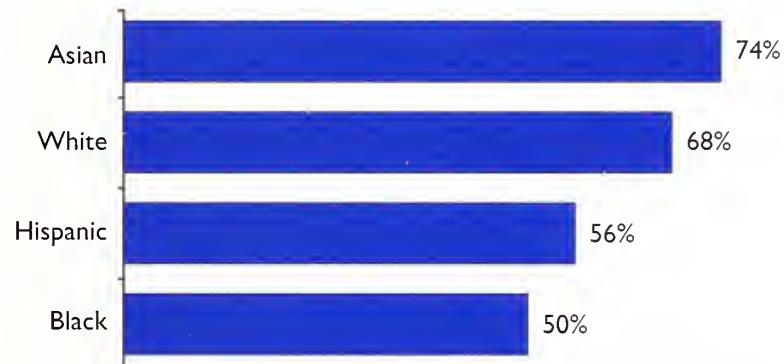
Limited data are available to compare use rates for Medicare beneficiaries in managed care and FFS.⁸ Based on HEDIS data for 2000, Medicare beneficiaries in M+C plans were as likely to have had a mammogram within the past two years as all Medicare beneficiaries.⁹ The median M+C health plan reported that three in four (75 percent) beneficiaries over 65 had received a flu shot in the past year, 9 percentage points higher than the national average for all Medicare beneficiaries.⁹ One study of senior cancer patients found that HMO enrollees were more likely to be diagnosed at an early stage than individuals in FFS Medicare.¹⁰

There is some evidence that the mandatory reporting requirements for M+C health plans for certain preventive services provide strong incentives for health plans and providers to improve utilization rates.^{8, 9} In 2000, M+C health plans that had been accredited by the National Committee for Quality Assurance (NCQA) exhibited higher rates of breast cancer and cholesterol screening than non-accredited M+C plans.⁹ Use rates for mammograms, colorectal screening and flu and pneumonia vaccines for M+C subscribers are collected annually by NCQA and CMS and reported to purchasers and beneficiaries.



Figure 3: Percent of Medicare Beneficiaries Over 65 Using Selected Preventive Services, by Race/Ethnicity, Income, and Education, 2001

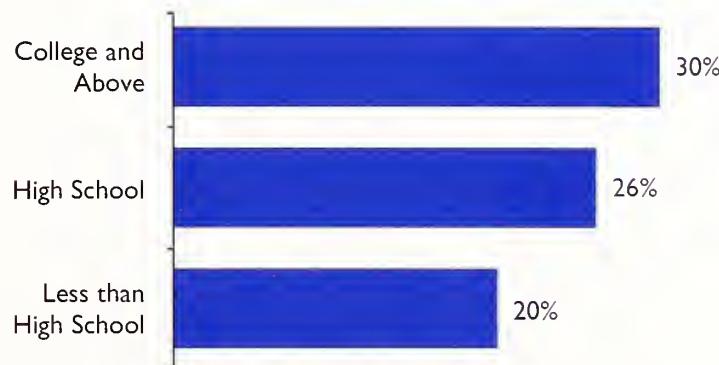
Flu Shot in Past 12 Months



PSA Test in Past 12 Months



Home Blood Stool Test in Past 12 Months



Source: Author's analysis of Behavioral Risk Factor Surveillance System, 2001.

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Use of Preventive Services Among The Under 65 Population

When it was created, Medicare was designed to resemble health coverage provided to working adults.¹¹ Many observers have criticized the program for failing to keep up with changes in employer sponsored health coverage over the past 37 years.^{11, 12} Examination of preventive service use by the working population under age 65 could reveal successful strategies to increase use rates under Medicare. However, direct comparisons of use rates between different age groups need to be interpreted with caution. For example, Medicare covers mammograms annually, but many health plans only cover mammograms every two years. Further, one would expect to see higher use rates for certain preventive services such as the pneumococcal vaccine among seniors because their risk of having a life threatening case of pneumococcal pneumonia is much higher than for younger persons. Finally, 16 percent of the non-elderly population lacks health insurance coverage.

The use rates for colorectal cancer and breast cancer screening were similar for individuals between 50 and 64 years and those over 65. In 1999, roughly three-quarters (72 percent) of adults between 50 and 64 years had received either a sigmoidoscopy or colonoscopy within the past five years.⁴ About three-quarters of women over age 50 had had a mammogram within the past year, which is similar to the rates for Medicare beneficiaries over age 65.⁴ Cervical cancer screening rates decline with age with 92 percent of women between 18 and 39 having had a Pap smear within the past two years compared to only 69 percent of women over age 65, although this decline may be appropriate based on USPSTF recommendations.⁴

Among the population between 18 and 64, health insurance is the most important determinant of the use of clinical preventive services. Insured individuals are more likely to receive these services. Employer-sponsored plans typically provide coverage for mammography (92 percent), pap smears (90 percent), and periodic physical exams (87 percent).¹³ The majority of health plans cover colorectal screening (77 percent) and influenza vaccination (64 percent).¹³ Very few health plans explicitly cover counseling for alcohol (21 percent), nutrition (20 percent), physical activity (15 percent), and injury prevention (9 percent).¹³ Even with full coverage, however, there is strong evidence that many preventive services are not used at recommended levels by the under 65 population.¹⁴

BARRIERS TO USE OF CLINICAL PREVENTIVE SERVICES

A number of factors determine the use rates for health care services including the policy environment, the organization of the health care system, and characteristics of health providers and populations.¹⁵

Policy Environment

Multiple potential barriers in the policy environment may limit the use of preventive services by Medicare beneficiaries. The congressional process of approving coverage for each new preventive service may serve as a barrier to their use. Although Congress has often sought expert scientific advice, the inherently political nature of the process favors procedures related to high-profile conditions even in the absence of a scientific consensus.¹⁶ For example, prostate cancer screening was approved despite inconclusive evidence, while services with stronger evidence, such as vision screening and tobacco cessation counseling, have not

been approved for coverage. Further, a recent Institute of Medicine (IOM) report commented that Congress paid insufficient attention to implementation, delivery, and non-financial barriers to accessing preventive services already covered.¹⁷

A second barrier is the lack of clear vision from Congress and CMS that a critical goal of the Medicare program is to prevent disease and improve the health of the senior population. The inclusion of additional preventive services based on the best evidence can add value to the Medicare program, but this is not sufficient to transform Medicare into a program that emphasizes health promotion and risk factor reduction. Since its inception, Medicare has strenuously avoided interfering in the practice of medicine by clinicians and institutions. Thus at its roots, Medicare remains a health insurance program rather than a comprehensive health improvement and maintenance plan for seniors.¹⁸ Recently, the IOM has called on Congress and the Administration to provide a clear mandate to CMS to become an effective buyer of health care, rather than simply a payer of claims.¹⁹

Health System Characteristics

Characteristics of the health care system also influence the use of preventive services. At the outset of the program in 1997, M+C plans were more likely to cover additional preventive services beyond those mandated by Congress and offer reduced cost-sharing requirements for beneficiaries.⁷ However, based on limited available data, it is not clear that participation in M+C is associated with higher rates of use of preventive services. Nationally, the number of plans offering additional services has declined, as has the number of states where plans offering additional services are available because

many health plans maintain that Medicare provides inadequate reimbursement under caps established in the Balanced Budget Reconciliation Act.⁷

The Medicare FFS payment system provides mixed incentives for the use of preventive services. By paying for each service delivered, the FFS system should encourage the delivery of multiple preventive services to Medicare beneficiaries. The low reimbursement rates for the administration of adult vaccines, however, may limit delivery rates of these services by providers.

The relatively low use rates of preventive services in some rural states may reflect the limited supply of health care providers. Physicians are not equally distributed throughout the country. Instead, they are heavily concentrated in urban and suburban areas. Consequently, individuals living in rural areas often have less access to health care services, including preventive services.

Health Care Providers

Within a health care setting, multiple issues can impede the delivery of preventive services, such as provider knowledge and attitudes, reimbursement systems and incentives, and provider scope of practice. In their formal training and continuing education, providers may not receive sufficient education about the benefits, indications for, and efficient delivery of preventive services.²⁰ Medicare, the largest source of funding for medical education, pays predominantly for hospital-based training with few exceptions. Thus, training for delivery of clinical preventive services, largely delivered in the context of community private practice, has little financial support. Because Medicare supports training for patient care only, training for



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delivery of population health activities is not supported, despite the important role health professionals can play in community-based health improvement efforts. Once in practice, demands on their time—our “six minute health system”—may contribute to low preventive services use rates among seniors.

Financial incentives also can have a strong influence on physician behavior. A recent study found that 85 percent of general internists think reimbursement for immunizations under Medicare is inadequate and poses a barrier for their practices to continue to provide this service.²¹ In its recent proposed rule on the Medicare physician fee schedule for 2003, CMS increased payment rates for most immunizations, but not for influenza, pneumococcal and hepatitis B vaccine administration.²¹

Finally, Medicare’s narrow definition of provider does not allow health care organizations to take advantage of many avenues to provide health promotion and disease prevention services.¹⁸ Expanding the definition of “provider” to include allied health professionals, such as nutrition therapists and exercise physiologists, could expand opportunities for the delivery of preventive services.

Population Characteristics

At the patient level, lack of insurance coverage and the imposition of co-payments on an individual represent important barriers to the use of preventive services.²² A recent study found that although differences in use rates between seniors with and without supplemental insurance have narrowed, seniors without supplemental insurance were 10 percent less likely to receive a cholesterol test, mammography or Pap smear than those with supplemental

coverage.²³ Fortunately, 90 percent of Medicare beneficiaries have supplemental coverage through their employer, Medicaid, M+C, or a Medigap policy which covers the deductible and cost-sharing payments under Part B for preventive services.²⁴ Thus, cost-sharing should not represent a significant barrier for the majority of Medicare beneficiaries.

Demographic characteristics such as residence, race, age, and education also may serve as barriers to access. Individuals living in urban and suburban areas, whites, younger seniors and those with higher educational attainment were more likely to use preventive services than persons living in rural areas, minorities, older adults and persons with less education.²³

A growing body of evidence supports the notion that the majority of Medicare-covered preventive services provide health benefits for seniors of all ages.^{25,26,27} Certain groups of beneficiaries and their providers, however, may not perceive significant benefits from a preventive service due to lack of knowledge, attitudes, and beliefs or conflicting scientific evidence. For example, some older seniors may not perceive a personal benefit from the receipt of cancer screening because they assume a short life expectancy.²

INTERVENTIONS TO INCREASE USE OF MEDICARE CLINICAL PREVENTIVE SERVICES

Activities of the Federal Government

Over the past decade, the federal government has undertaken a number of activities to understand what influences use rates for preventive services. It also has funded interventions to increase



overall use and reduce disparities among different sub-populations. The CMS, CDC, and AHRQ within the Department of Health and Human Services (DHHS) are all working to achieve these objectives, but their efforts do not appear to be part of a single comprehensive plan.

Healthy People 2010 is the prevention agenda for the nation.²⁸ It is a statement of national health objectives designed to identify the most significant preventable threats to health and to establish national goals to reduce these threats. *Healthy People 2010* has identified 467 objectives to improve the health of Americans by the year 2010. These objectives are national, not federal. Success depends on health agencies at all levels of the government and nongovernmental organizations. Systematically collecting, analyzing, interpreting, disseminating, and using health data is essential to understanding the health status of a population, to assessing progress, and to planning effective prevention programs. The U.S. Department of Health and Human Services takes the lead role in national health data collection, but it is only one partner within the larger structure needed to collect information on the health status and factors affecting the health of the population. Despite its lofty aims, the *Healthy People Initiative* has been chronically under-funded since its inception in 1979 and exerts relatively minor influence in shaping federal health care policy and financing decisions.

Of Medicare's ten covered preventive services, however, *Healthy People 2010* has only established national targets for six. (Table 2) Two preventive services, pneumococcal and influenza vaccinations, have specific target rates for adults over 65. Only mammograms currently meet the national target use rate among the over 65 population.

Centers for Medicare and Medicaid Services (CMS)

As the administrator of Medicare, CMS has primary oversight of the reimbursements for preventive services. Over the past five years, CMS has funded a number of initiatives to increase use of these services and reduce disparities. In 1998, CMS commissioned the Southern California Evidence-Based Practice Center to review all interventions designed to increase use rates for influenza and pneumonia vaccinations and breast, cervical, and colon cancer screening to determine which were the most effective. Based on the results of that analysis, CMS is implementing a series of interventions in every state through 53 Quality Improvement Organizations (QIOs) to monitor and improve the quality of care delivered to Medicare beneficiaries.

Currently, QIOs are working to increase flu and pneumonia shots and breast cancer screening in each state by working with hospitals and health care providers to implement systems changes.² For example, CMS is encouraging the implementation of standing orders programs (SOPs) in nursing homes, clinics, and hospitals in nine states to increase immunization levels among seniors. QIOs also are required to implement at least one intervention designed to increase the use of preventive services by minority and low-income Medicare beneficiaries. In response to a congressional mandate under the Benefits Improvement Performance Act of 2001, CMS is also conducting nine demonstration projects to eliminate disparities in the use of cancer screening services.

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Table 2: Summary of Medicare Coverage, USPSTF Recommendations, National Data Sources, National Use Rate Targets, and Current Use Rates for Selected Clinical Preventive Services

Preventive Service	Medicare Coverage (Year Covered)	USPSTF Recommendation	Source of Population Use Rates	Healthy People Target Use Rate	Current Use Rate Among Medicare Beneficiaries Over 65
Immunizations					
Pneumoccal	Covered (1981)	Recommended at least once for individuals age 65 and over	BRFSS, NHIS, HEDIS	90 percent of adults over 65	60 percent
Hepatitis B	Covered (1984)	Recommended at least once for individuals at high risk of infection	National use data not collected	90 percent of high-risk populations	35 percent of hemodialysis users ²
Influenza	Covered (1993)	Recommended annually for individuals age 65 and over	BRFSS, NHIS, HEDIS	90 percent of adults over 65	66 percent
Screening Services					
Cervical cancer (Pap Smear) (Pelvic Exam)	Covered (1990) (1998)	Recommended every 3 years for all women who are or have been sexually active ^{**} Not recommended	BRFSS, NHIS	90 percent of all sexually active women within past 3 years	72 percent
Breast cancer (Mammography)	Covered (1991)	Recommended every 2 years for women over 40	BRFSS, NHIS, HEDIS	70 percent of women over 40 within past 2 years	75 percent
Vaginal cancer (Pelvic Exam)	Covered (1998)	Not reviewed	National use data not collected	No target set	N/A
Colorectal cancer (Fecal-occult blood test) (Sigmoidoscopy) (Colonoscopy)	Covered (1998)	Recommended for adults over age 50: Every year Every 5 years Every 10 years	BRFSS, NHIS HEDIS	50 percent of adults over age 50 within past 2 years 50 percent of adults over age 50 ever in lifetime	26 percent within the past year ¹ 44 percent within past 5 years ¹
Osteoporosis (Bone Mass Measurement)	Covered (1998)	Routine screening is recommended for women over age 65	National use data not collected	No target set	N/A
Prostate cancer (Prostate specific antigen test and/or digital rectal examination)	Covered (2000)	Insufficient information to recommend for or against routine screening	BRFSS, NHIS	No target set	63 percent
Glaucoma	Covered (2002) NHIS	Recommend referring high-risk patients for an evaluation	Data potentially available on NHIS	Developmental measure with no target set	N/A

¹ Data from BRFSS.

² Data from Annual Survey of Chronic Hemodialysis Centers.

** According to the USPSTF, there is insufficient evidence whether to continue Pap smear testing for women over 65 with consistently normal results, but a case can be made to discontinue screening based on other grounds.

SOURCES: MedPAC. Report to Congress: Assessing Medicare Benefits. Washington, DC: 2002. United States General Accounting Office. Medicare: Beneficiary Use of Clinical Preventive Services. Washington, DC: US General Accounting Office; 2002. Department of Health and Human Services. (2002) Healthy People 2010. <http://www.healthypeople.gov>. U.S. Preventive Services Task Force. Screening for Prostate Cancer: Recommendations and Rationale. Annals of Internal Medicine 2002; 37(11):915-6.



Standing orders programs authorize non-physicians to administer a preventive service based on an institution- or physician-approved protocol without a physician's exam. SOPs have been documented to improve vaccination rates among adults.²⁹ Standing orders programs can be used in inpatient and outpatient facilities, long-term-care facilities, managed-care organizations, assisted living facilities, correctional facilities, pharmacies, adult workplaces, and home health-care agencies to vaccinate patient, client, resident, and employee populations.³⁰ Insufficient use of standing orders places additional burden on physicians and reduces practice efficiency, which can lead to missed opportunities.²⁹

Beyond these targeted interventions, CMS has undertaken a number of other health promotion, data collection and research activities. CMS has sponsored media campaigns to inform Medicare beneficiaries about preventive service benefits and encouraged their use. CMS recently contracted to conduct a national telephone survey to ask Medicare beneficiaries about their use of flu and pneumonia shots.

CMS also is exploring the concept of developing a health risk appraisal (HRA) and referral program for seniors.³¹ HRA assesses mental, physical and social function, use of clinical preventive services, health status, lifestyle risk factors, and behavioral characteristics.³² CMS plans to test several approaches to implementing HRA over the next few years.

Centers for Disease Control and Prevention (CDC)

The CDC plays a supportive role in increasing the use of preventive services through data collection and analysis and limited funding of programs. The CDC collects data on the use of many preventive services through the Behavioral Risk Factor Surveillance System (BRFSS), a national database devel-

oped from state-level surveys that collect information on a number of risk factors annually. Currently, the BRFSS collects data on six of the ten Medicare-covered services every two years. The CDC also convenes the Task Force on Community Preventive Services to review evidence about the effectiveness of non-clinical interventions to improve the health of the population. As part of their mandate, the Task Force reviews the effectiveness of system-level changes to improve the delivery of clinical preventive services. The CDC also is working with the Administration on Aging and CMS to increase use rates for preventive services. Finally, the CDC provides funding to the Sickness Prevention Achieved through Regional Collaboration (SPARC), which works at the community level to expand the use of preventive services by older adults. The program began in 1994 and currently serves a population of 630,000 in four counties at the junction of Massachusetts, Connecticut, and New York by bringing together local agencies to coordinate the delivery of preventive care.

Agency for Healthcare Research and Quality (AHRQ)

Over the past decade, AHRQ assumed responsibility for the USPSTF. The USPSTF periodically reviews evidence about the effectiveness of more than 200 clinical preventive services, including 9 of the 10 explicitly covered by Medicare. Extending the work of USPSTF, AHRQ has implemented the "Putting Prevention into Practice" program, which provides information and tools to support the delivery of preventive services by health providers.³³ CMS and AHRQ have collaborated to develop information for patients and providers based on the work of the USPSTF to promote use of newly-covered preventive services in Medicare, such as bone density tests.

Increasing Use of Clinical Preventive Services among Medicare Beneficiaries

Since 1996, AHRQ has been working with the National Committee for Quality Assurance (NCQA) to extend the Health Plan Employer Data Information Set (HEDIS) to collect information about delivery of preventive services to Medicare M+C beneficiaries. As of 2002, HEDIS includes data on colorectal and breast cancer screening and flu and pneumonia vaccinations for seniors.

What Works at What Cost?

Federal agencies have sponsored two major systematic reviews of the evidence regarding interventions to increase the use of clinical preventive services. The reviews conclude that no single magic bullet will increase use of preventive effective for all services, settings, and populations. However, some common themes emerged. While these reviews are instructive for the evidence that they summarize, they also expose important limitations in research and highlight significant information gaps.

Effectiveness of Interventions

Under a contract from CMS, the Southern California Evidence-Based Practice Center (EPC) reviewed 218 studies, including 288 comparisons of interventions to increase the use of pneumonia and flu vaccines and breast, cervical and colorectal cancer screening. Across all five services, the EPC study found that organizational changes such as standing orders programs were the most effective means of increasing use. (See Sidebar) Patient financial incentives were also found to be highly effective across multiple services. Patient reminders and patient education demonstrated a consistent effect across all five services. Feedback to providers, however, was found to be relatively ineffective. The latter involves evaluating the performance of providers in delivering services to their patients and reporting this information

back to them. It can include incentives for performance or benchmarking, which compares a provider's performance to his or her peers. The findings from this review are summarized in Table 3.

In its review of the most effective interventions for increasing vaccination rates among all age groups, summarized in Table 4, the Task Force on Community Preventive Services also found that standing orders were the most effective with a 28% increase in vaccine use relative to the baseline rate. The remaining interventions all resulted in between 10 and 17 percentage point increases in vaccine use relative to baseline rates.²⁹ Multi-component interventions were found to be more effective than single-component interventions. Multi-component interventions that include education also may increase community awareness of the availability, usefulness, and relevance of vaccination services beyond those individuals who use the services.

Despite the richness of insights gained, collectively these reviews only focused on five of the 10 preventive services explicitly covered by Medicare. Many of the studies reviewed focused on non-elderly adults and children so it is not clear if the results can be applied to the over 65 population. There have been no systematic reviews of interventions designed to increase the use of other separately covered preventive services, implicitly covered services such as blood pressure screening or cholesterol screening, or uncovered services such as tobacco cessation counseling and vision screening among seniors in the United States. In addition, the reviews contained insufficient data to draw definitive conclusions about which interventions are more effective for vulnerable populations, rural settings, and different types of delivery systems.



Table 3: Effectiveness of Interventions to Improve the Use of Clinical Preventive Services

Immunizations			Mammography			Cervical Smear Cytology			Colon Cancer Screening (FOBT)		
Intervention	Odds Ratio*	95% Confidence Interval	Intervention	Odds Ratio*	95% Confidence Interval	Intervention	Odds Ratio*	95% Confidence Interval	Intervention	Odds Ratio*	95% Confidence Interval
Organization Change	7.2	5.9-8.7	Patient Financial Incentive	3.6	2.4-5.4	Patient Financial Incentive	3.1	2.6-3.7	Organization Change	18.1	12.7-25.9
Provider Reminder	4.3	3.8-4.9	Patient Reminder	2.6	2.2-3.0	Organization Change	2.7	2.3-3.1	Provider Education	4.0	2.8-5.8
Patient Financial Incentive	3.5	3.0-4.1	Organization Change	2.3	1.8-2.8	Patient Reminder	1.8	1.7-2.0	Patient Reminder	3.7	2.8-5.0
Provider Financial Incentive	2.6	1.9-3.6	Provider Education	2.3	1.8-2.8	Provider Education	1.6	1.3-2.0	Patient Financial Incentive	2.2	1.7-2.9
Patient Reminder	2.4	2.2-2.7	Provider Reminder	1.6	1.4-1.9	Patient Education	1.5	1.3-1.8	Patient Education	1.8	1.1-2.8
Provider Education	1.7	1.4-2.0	Feedback	1.5	1.2-1.8	Provider Reminder	1.4	1.3-1.5	Provider Reminder	1.5	1.2-1.8
Patient Education	1.3	1.2-1.5	Patient Education	1.3	1.1-1.5	Provider Feedback	1.1	.97-1.3	Provider Feedback	1.1	0.9-1.4
Provider Feedback	1.1	0.9-1.4									

* Interventions with a larger odds ratio have demonstrated greater effects on the use of the service. The actual effect size of different interventions depends on the baseline use rate. A highly effective intervention (8.0 odds ratio) would increase use from a baseline rate of 20 percent to 67 percent while the same intervention would increase a baseline rate of 80 percent to 97 percent.

SOURCE: Southern California Evidence-based Practice Center. A Systematic Review of the Literature on Interventions to Increase the Use of Clinical Preventive Services under Medicare. Santa Monica, CA: RAND Corporation. (1999).

Cost and Cost-Effectiveness of Interventions

Unfortunately, few studies have calculated the cost of interventions designed to increase use of preventive services covered by Medicare. Thus, limited data are available to assess the cost-effectiveness of these interventions, i.e. the health benefit for each dollar invested.

Based on existing evidence, however, it is possible to identify higher and lower-cost interventions among those that were

found to be effective. If the appropriate systems are in place, then standing orders are likely to be low cost and very effective at increasing use rates.³⁴ Patient reminders were found to be effective and have a low cost of \$1 to \$5 per clinical preventive service delivered. Although patient financial incentives and home visits were both found to be effective, they were found to be more resource-intensive compared to other interventions.²⁹ Provider education was found to be less effective and more expensive than patient education.³⁴ Given the heterogeneity

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Table 4: Systematic Review of Interventions to Increase Use of Vaccinations

Intervention	Setting	Population	Number of Studies	Average Effect Size (Median Improvement)
Cross-Cutting Interventions				
Multi-component interventions that include education	Clinical and community settings	Adults and children from variety of racial/ethnic and economic backgrounds	15 studies	16 percentage points
Client reminder/recall, provider education, patient education, reducing costs, standing order programs, community-wide education, client incentives, home visits, and provider assessment and feedback	Diverse settings	Adults and children	12 study arms	12 percentage points
Health Care System				
Home visits	Home	Adults and children who are socio-economically disadvantaged	7 studies	10 percentage points
Health Care Providers				
Standing orders programs	Diverse populations in clinics, hospitals, and nursing homes	Adults	8 studies	28 percentage points
Provider reminder/recall systems	Diverse settings and populations	Adults, adolescents, and children	17 study arms 12 study arms of multicomponent programs	17 percentage points 14 percentage points
Assessment and feedback for vaccination providers	Wide range of providers and contexts	Adults and children	5 study arms 8 study arms of multicomponent programs	16 percentage points 17 percentage points
Population				
Reducing costs of vaccinations for consumers	Clinic and community context	Children and adults of varying socioeconomic status	15 study arms	15 percentage points

SOURCE: Task Force on Community Preventive Services. Recommendations regarding interventions to improve vaccination coverage in children, adolescents, and adults. *American Journal of Preventive Medicine* 2000; 18(1S):92-96.



Setting Priorities

among preventive services and interventions to increase their use, caution should be exercised in extrapolating these results more broadly.

ESTABLISHING PRIORITIES

Among Clinical Preventive Services

Although it would be ideal to increase the use of every covered preventive service so that every senior received all services at the recommended intervals, this is not feasible. Given limited resources, CMS has prioritized its efforts and initiated efforts in every state to increase use of influenza and pneumonia vaccinations and breast cancer screening rates.² Currently, CMS is also developing performance measures for screening for osteoporosis, colorectal cancer and prostate cancer.

The rationale behind CMS's choice to prioritize breast cancer screening and influenza has not been published.² Mammography screening rates are the highest among covered preventive services at 75 percent, exceeding the Healthy People 2010 target. Two in three Medicare beneficiaries are already vaccinated for the influenza virus annually. If a large percentage of seniors already access particular clinical preventive services, new interventions designed to increase use may target systems and providers that already provide preventive services, and individuals who already receive them.³⁵

The same intervention can produce dramatically different results when applied to two preventive services with different baseline use rates. For example, a highly effective intervention (odds ratio = 8.0) would increase use from a baseline rate of 20 percent to 67 percent. The same intervention applied to another service with a high base-

line rate of 80 percent would only increase it to 97 percent.³⁴ Thus, even highly effective, low-cost interventions not targeted at the lowest-use population or services could represent an inefficient use of resources. The optimal strategy would be to implement cost-effective interventions among the lowest use populations and services.

Recommendations for More Systematic Approaches

We recommend that CMS adopt a more systematic approach to establishing priorities among preventive services and interventions. One prioritization approach undertaken by Partnership for Prevention ranked 30 recommended clinical preventive services. Prioritization was based on three factors: 1) the portion of disease, injury, and premature death prevented if the service were delivered to all persons in the target population on a regular basis, 2) cost-effectiveness, measured as the net cost of the preventive service divided by the service's health benefits, and 3) current national delivery rates.²⁷ Alternatively, prioritization could consider the distance between services' current use rates and established target rates, such as those set in Healthy People 2010.

Using the results of Partnership's ranking of preventive services, two Medicare covered services and two services not currently covered should be considered as high priorities:

- Regular screening for colorectal cancer, the second leading cause of cancer death, has been shown to reduce mortality between 15 and 33 percent. If screening with FOBT and sigmoidoscopy were delivered to all persons 50 and older on a regular basis, approximately 18,000 deaths could be prevented in one year.²⁷

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- The pneumococcal vaccine, which is effective for at least 10 years, would help reduce hospitalizations and premature death due to invasive pneumococcal disease (a bacterial infection) among seniors. This service is cost saving.²⁷
- Provider counseling about tobacco use—including nicotine replacement treatment and additional counseling—would address the nation's leading cause of death and is highly cost-effective.²⁷
- Vision screening by primary care providers would help eliminate the high prevalence of correctable poor vision among seniors. A third of adults 65 and older have under-corrected vision and would benefit from screening, but fewer than half of adults over 65 years old are screened for undetected vision impairments.²⁷ Poor vision reduces quality of life and is a possible cause of falls that result in hip and other fractures.²⁷

An alternative approach to prioritizing individual clinical preventive services would be to package multiple preventive services into periodic preventive care visits. Periodic well visits might also be covered if all appropriate preventive services were provided. Packaging preventive services also could increase the percentage of individuals who receive more than one preventive service.³⁶

In 1985, Congress mandated that the Health Care Financing Administration (now CMS) conduct demonstrations to evaluate the effectiveness and cost of coverage for a comprehensive range of preventive services under Medicare, including history and physical exam,

laboratory tests, health risk assessment, and risk counseling. Overall, the results of the six demonstration projects were mixed, providing little additional benefit, but incurring little additional costs. Results from the demonstration project in Baltimore suggest that offering a comprehensive package of preventive services could have positive effects on health status. Researchers found that after adjusting for other factors, beneficiaries in the intervention group had a significantly lower death rate over the two-year study period: 8.3 percent vs. 11.1 percent in the control group.³⁷

Among Interventions to Increase Use Rates

CMS already has compiled considerable data about the effectiveness of different interventions designed to increase use of certain preventive services, which could be used to prioritize interventions. Consideration should be given to the likely effects and relative ease of implementation of the intervention in "real world" settings. Unfortunately, limited data are available to consider the relative costs of the interventions compared to their effectiveness. In the short term, a broad prioritization or ranking of interventions may be possible using methods similar to those described above to prioritize among preventive services. The ability to compare the clinical effectiveness and cost-effectiveness of interventions across different services will only be possible as the body of evidence grows.

CONCLUSIONS

CONCLUSIONS

The Medicare program has a critical role to play in improving the health of older Americans—it should maximize the use of currently covered services and cover additional effective preventive services and other measures to promote that goal.³⁸

Congress

Transferring decision making about coverage of individual clinical preventive services under Medicare to DHHS would bring these decisions in line with coverage decisions about other medical technologies under Medicare. If authority is transferred, DHHS should be given sufficient authority to add or remove preventive services and alter target populations and periodicity based on their clinical effectiveness and cost-effectiveness.

Department of Health and Human Services

There is a clear need for better coordination among federal health agencies with regard to clinical preventive services under Medicare. DHHS is the obvious choice to coordinate all activities by individual agencies related to prevention and preventive services by Medicare beneficiaries.

The collection of data is essential to assess the use of covered services and to identify disparities in use rates. Despite an abundance of potential data sources on the use of preventive services by Medicare beneficiaries, significant gaps in information remain for policy makers and the public. The content of existing national health surveys should be coordinated to regularly collect information on every preventive service covered by Medicare. To monitor progress, Healthy People 2010

should include objectives and target use rates for all preventive services covered by Medicare. Information about the use rates among Medicare beneficiaries for all covered preventive services should be published regularly.

CMS should fully utilize the evidence-based information produced by USPSTF and Task Force on Community Preventive Services in its decision-making process about which services and interventions to prioritize. Based on the findings of the USPSTF and Task Force on Community Preventive Services, CMS should direct additional funding to community, health system, and beneficiary-level interventions to increase the use of priority services among groups with the lowest use rates and conditions with the greatest burden of disease.

Additional Research

Despite previous research efforts, many questions remain unanswered about the use of clinical preventive services by Medicare beneficiaries. More “real world” studies are needed to provide information on the specific barriers that the population over 65 faces in accessing preventive services. More information is needed about the effectiveness of interventions designed to increase the use of covered services by individuals 65 and over. Additional research and data on follow-up rates for abnormal test results would ensure that screening produces result in the maximum health benefit for seniors.

Nearly 6 million of Medicare's 40 million beneficiaries are younger persons, who qualify for the program because of a permanent disability or End Stage Renal Disease (ESRD). This paper and the majority of research studies and demonstration projects have focused on increasing the



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use of preventive services among Medicare beneficiaries over age 65. Additional research is needed on the use of preventive services by Medicare's disabled populations, additional barriers that they may encounter in accessing preventive services, and interventions to meet their specific needs.

Finally, DHHS should sponsor research aimed at vulnerable Medicare beneficiaries to find effective interventions designed to increase use of preventive services. More information is needed about increasing use of preventive services among African Americans and Hispanics, adults 75 years old and older, individuals living in rural areas, and persons living in nursing homes. Relatively few studies have examined interventions targeting these groups.



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